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November 1979, vol. 70, no. 11

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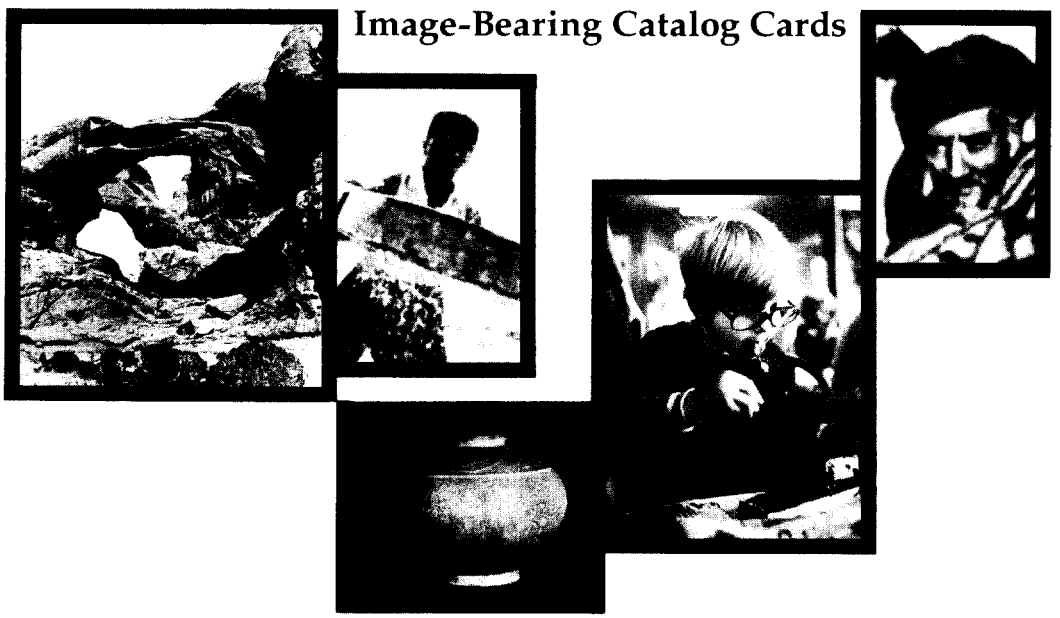

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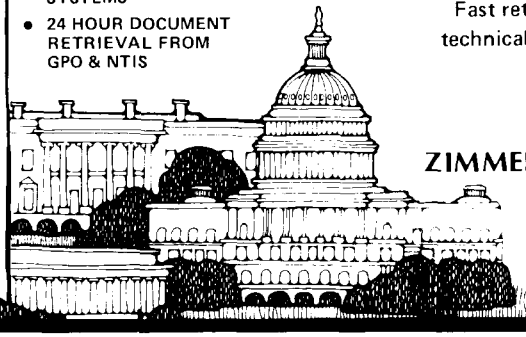

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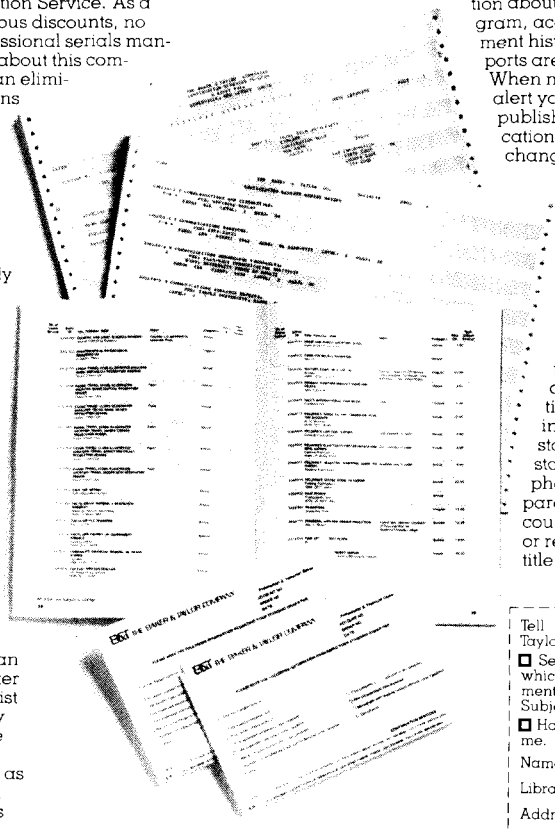

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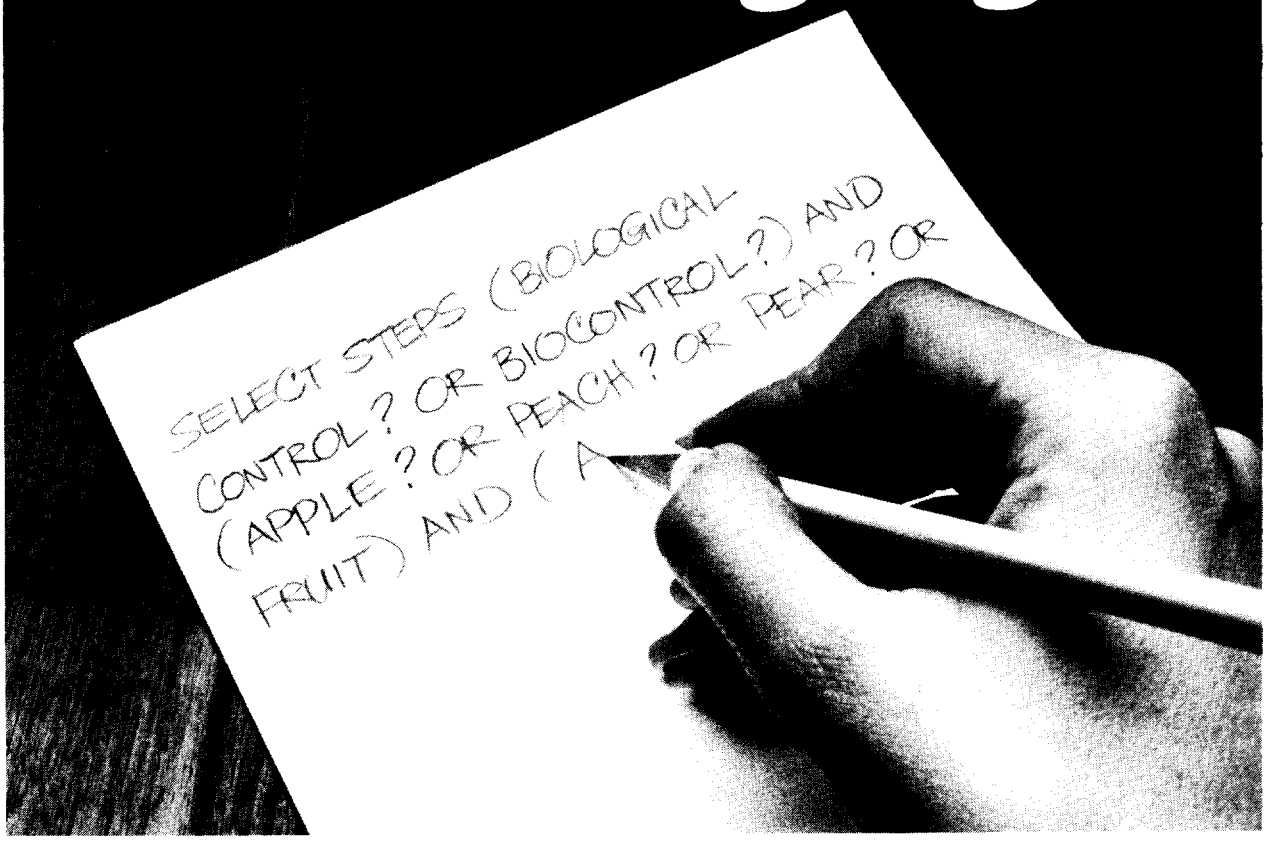

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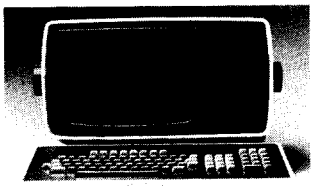

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LETTERS

Standards for Archival Education

I am writing on behalf of the Society of American Archivists (SAA) to clarify several points raised by Enid T. Thompson in her article "Commentary on Archival Management and Special Libraries." [SL: 491-92 (Dec 1978)].

Thompson notes that the Society of American Archivists "is defining basic standards for archival education and is exploring accreditation of archival courses and archivists themselves." This statement is true, but she goes on to say the following:

> Basic required courses for all branches of the profession include, according to current recommendations: records management, microforms, introduction to archives, manuscripts and historical archives, conservation, introduction to museology, introduction to historic preservation, and introduction to graphics. Library cataloging and bibliography are also considered essential.

The implication of this statement is that these courses are recommended by the SAA. This is not the case. Indeed, many archivists and archival educators would strongly disagree with Thompson's list. The SAA Committee on Education and Professional Development would like to clarify this matter for members of the Special Libraries Association.

The SAA Guidelines for Graduate Archival Education Programs specify five elements that should be part of the course work in graduate archival education programs. Archival courses must cover the nature, acquisition, processing, and use of archives and the administration of archival repositories. Detailed definitions are included in the guidelines. In addition, graduate archival education programs must include a minimum of 140 hours of practical experience in the major facets of an archival program. Detailed guidelines for this practicum are presently being considered by the SAA Council. Copies of both sets of guidelines are available free of charge from the SAA, 330 S. Wells, Suite 810, Chicago, IL 60606.

I would also like to clarify Thompson's statement that Case Western Reserve University, the University of Wisconsin, and the University of Maryland offer Master's degrees in "Historical Archives." At these institutions, as well as many others, archival education is a *minor* concentration in degree programs leading to either the MA in history, the MLS in Library Science, or both. To my knowledge, no academic institution in the United States offers a degree in "Historical Archives."

F. Gerald Ham
Chairman
SAA Committee on Education and Professional Development

Special Libraries welcomes communications from its readers, but can rarely accommodate letters in excess of 300 words. Light editing, for style and economy, is the rule rather than the exception, and we assume that any letter, unless otherwise stipulated, is free for publication in our monthly letters column.

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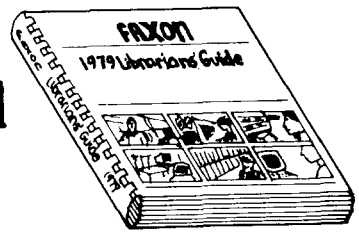

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Impact of Governmental Politics and Economics On Library Information Services

A View From the Inside

Hannah D. Atkins

Oklahoma State Legislature, Oklahoma City, Okla. 73136

"It was the best of times. It was the worst of times..." Charles Dickens's observations in the opening sentences of *A Tale of Two Cities* could apply to almost any age, but most certainly to this, the end of the decade of the seventies. Ours is a tale of many cities, in fact, an international tale.

For too long librarians have felt that they must be "a-political," must have a complete hands-off attitude toward the "dirty" political game. You have, as a group, a nonpolitical bias. The dominant political behavior of librarians has been one of low conflict, withdrawal and passiveness. If there are any social psychologists among us, perhaps they can identify that behavior and tell us what it is we suffer from.

By your mere passivity and the stance of clinging to the status quo, "going along to get along"—"don't rock that powerful boat"—syndrome, you have tied a ribbon around the package of power and handed it over to the decision makers. By not taking positions, by not being activists, you have *not* succeeded in being *nonpolitical*. Your political position has too often been a prone one . . . ready to be run over by the power structure. Your very decision not to push, not to lobby, not to be involved is in itself a political decision—one of *inaction*. Inaction results in libraries being bypassed when the goodies are handed out. I am calling on you to turn your attention to this other world—this netherworld, the world of governmental politics.

In looking through copies of *Special Libraries* for 1978 and 1979 there were few articles relating to political issues—two issues I particularly noticed were ERA and postal regulations. Even major textbooks on library administration do not devote much space to political decision making, directly. Government has more impact on your lives and mine than those two issues, as important as they are; certainly there are more library-oriented issues upon which governments do have an effect.

It is elementary to restate what is common knowledge; that politics is

Ms. Atkins address was presented at Plenary Session IV, Jun 12, 1979, during SLA's 70th Annual Conference in Honolulu.

involved in our personal lives from birth to death. We are neither officially born nor can we be buried without a governmental certificate. In between birth and death, government continually has a finger in our lives. In short, politics is concerned with all human endeavor and activity.

Lewis A. Froman, Jr., in his treatise, *People and Politics* defines politics:

> Politics, in its broadest sense, is concerned with the distribution of advantages and disadvantages among people. Individuals have different wants and needs. Since people are constantly interacting with each other, and since the satisfaction of many of a person's needs depends upon the relationships he establishes with others, the preference of some individuals will inevitably come into opposition with the preference of others. This opposition of preferences may result in competition or conflict and in attempts by those concerned to reach some sort of accommodation, varying from the elimination of the competitor to a reconciliation of differences (*1*).

A number of factors influence the distribution of the "advantages."

Government also has been defined as the implementation of public preferences into public policy. *Whose* preferences prevail from 1979 into the 1980s and beyond is the most important question we raise.

The decade of the 1980s has been predicted to be one of political conservatism as the backlash to the liberal movements of the 1960s and early 1970s becomes more prevalent. Indeed, more than twenty years ago Hans Gerth and C. Wright Mills wrote of the "decline of liberalism" (*2*). The battle of liberals versus conservatives is long-standing and spans the continents.

Reverberations from the infamous "Proposition 13," which was passed by a majority of the voters in California last year, have been felt in state legislatures across the United States. Similarly, the elections of Margaret Thatcher in Great Britain and Joseph Clark in Canada have been evaluated as major signals that there is an international political mood toward retrenchment and retreat. No great scholarship is required to note the immediate impact of Proposition 13 and its stringent reductions in funds available for educational purposes or to understand the direct relationship of governmental politics. A deeper analysis, if we had the time to delve into the possibility of a mass psychosis, might indicate the climate for such behavior.

The Federalist in Paper No. 51 (by either Alexander Hamilton or James Madison) states eloquently:

> If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: You must first enable the government to control the governed; and in the next place oblige it to control itself (*3*).

In a democratic form of government, politics is essentially pluralistic and operates within certain human limitations. The U.S. political process may be portrayed as that of *competition, bargaining,* and *compromise* among a multitude of interest groups vying for the advantages distributed by the system. Not all political activity produces results that are satisfactory to all parties concerned. This is the price we pay in a pluralistic society.

One of the chief functions of government, therefore, whether in a democracy or otherwise, is to deliver services to the public. The efficiency and effectiveness of that government may be measured in relation to the quality and extent to which those services are delivered. Special libraries are similarly dedicated to the efficient and effective delivery of information and related services to whatever public they are responsible. The delivery of services is determined by the assignment of available resources. Priorities are arranged on the public agenda by politicians in a political arena. Whether resources will be expended for social services, defense, health, interplanetary research and development are *political* decisions.

The Effect of the Issues on Libraries

Let us look briefly at some of the major issues as they relate to the health and welfare of libraries. National and international polls have ranked inflation and energy as the two issues about which most of the public are concerned.

Inflation means simply that whatever funds there are allocated in your budget, whether for operating or capital needs, will evaporate before you can spread them over all the intended programs. Inflation, for most of us, dictates cutbacks of one degree or another, or an adjustment of priorities within the framework of income-expenditures balance sheets.

In a corporation's maneuvering between low productivity and high costs, libraries and information services are still viewed by too many decision makers as desirable but not essential and may be the first to meet reduced financial support.

As we approach 1984, some ominous aspects of the Orwellian state appear on the horizon. We are faced with the threat of a permanent loss of the range of free choice which we have enjoyed for the past generations in satisfying our enormous appetites to consume the goods and resources of this earth. The limits of energy already have had and will continue to have far-reaching consequences on public policy in general, and library and information services specifically.

The energy issue perhaps is one of the most complex ones facing the world today. Ultimately, we must consider the broader fields of social, economic, and environmental policies which determine the quality of life. Energy policies must take into consideration the uses to which energy is put, the forms of energy used, and the ensuing consequences. We may come to agree with Schumacher that "small is beautiful."

Whether fuel is available and affordable will affect such "small" decisions as the number of hours a library will be open; whether certain petroleum-based products will be in short supply or obsolete, and many others.

On a broader scale, governmental policies on wage and price controls, the allocation of fuels, and so on will affect the private and public sectors.

Governmental Policies Regarding Resources

Governmental resources going to libraries affect special libraries both directly and indirectly. The inclusion of funds in the Library Services and Construction Act for interlibrary loans is significant for special libraries worldwide.

We cannot overlook the importance of MARC; MARBI (Machine Readable-Form of Bibliographic Information); CASSI (Chemical Abstracts Service Source Index); COSATI (Committee on Scientific and Technical Information) and the numerous other acronyms and services they represent. The reorganization of the Library of Congress, as dull and routine as it may sound, can effectively increase or decrease the level of government involvement and support. The expansion of the documents depository system to include certain law school libraries will be a significant step (P.L. 95-261). In fact, Title 44 U.S. Code sets out those federal documents to be printed and how they are to be distributed. The Government Printing Office Microfiche Program will extend information to a worldwide audience, and much more economically than by the printed volumes.

Along with the provision of resources frequently comes the imposition of controls. The *Progressive* case and the proposed publication of H-Bomb "secrets" which had been readily available on special library shelves brings the problem close to our doors.

The problem of censorship by any government is a problem going back into antiquity with bookburnings and the prohibition of the publications of certain ideas an *accepted* role of government. If ideas are controlled, then the masses can be controlled. Freedom of

the press, freedom of speech, freedom of information are old goals which are still to be achieved in their fullness. The right of privacy of individuals must be balanced with the public's right to know. Intellectual freedom is a basic right and usually a rallying point for all libraries.

Politics is often spoken of as a game or a series of games. One former U.S. president frequently used figures of speech comparing the political arena to a football game. Others equate politics with poker or chess. I say that politics is a complex game, often several simultaneous games.

The big prize in the game of politics is the determination of governmental policy. The stakes are generally high. Those who win have mastered the rules, know the players well, and can anticipate their moves.

Definite patterns exist in public policy development and implementation for energy problems, agricultural problems, as well as library problems in the United States and other nations. The basic universal elements are as follows:

> Public problems are perceived by people who, if they have problems in common, → they organize and make demands → (or demands are made by those who represent people), demands are received by the decision makers → decisions are made and enforced, → people react to the decisions, some have common reactions → demands are made, and so forth.

The Impact of Libraries

Let us now, briefly, invert the theme of the SLA 70th Annual Conference—Politics and Economics: Their Impact on Library and Information Services. Let us now think of libraries and *their* impact on government.

Action by organizations becomes the pipeline to the political system. Unorganized individuals are no match for a giant bureaucracy. As organizations and coalitions with the combined power of individuals, you can hold the government responsible. Our pluralistic ideology contends that the democratic system is open and accessible to the extent that any interest held by a significant portion of the populace can find expression through one or more groups.

A word about "power." Those "advantages" mentioned earlier, those "goodies" that are delivered, represent **power** in action. Certainly those in power want to remain in power.

There is power in numbers—as the third largest library association in the world *you can make things happen.* Campaign and election time is the prime time to notify the candidates of your interests—to put your interests on the agenda. SLA is a sleeping giant. You can make things happen.

You must, of course, know your congressman and your representatives. Moreover, let them know you. Communication is the key. There should be constant interaction between the leaders and the led. I hope that those of you who are delegates to the White House Conference on Libraries will use that as an entrée into Washington. And with the 1980 Conference of SLA in the District of Columbia, I hope that blocks of time will be allocated for visits to your elected representatives.

Government moves, not on its stomach but on information. You are providing an essential service in an exemplary fashion. You are necessary. No apologies needed! Information is your specialty and politicians need information. Knowledge yields power also. Where do politicians get their information? You are an essential cog in the wheels of government. Communicate—let them hear from you as special librarians and as private citizens. Be prepared to testify before committees. Write letters, visit, carry out all of the activities that you know to do.

Political power does not exist in a vacuum. Support by the public is a basic part of success. Briefing sessions, either over lunch or breakfast with the media can get them to listen about libraries. During the SLA Conference in Honolulu, the Governor vetoed an appropria-

tion bill for a library. Somehow I doubt if there will be an out-cry from the legislators, the public, or from the librarians.

The press can be either pro-libraries, anti-libraries, or uninterested in libraries. Apathy is the least desirable of the three conditions and the most difficult to combat. Too many members of the press still have a stereotyped image of libraries and librarians: the unobtrusive, shrinking violet. As a group and as individuals, we must become assertive and aggressive. Are we the mild-mannered Clark Kent ready to step into a telephone booth and emerge as Super-Librarian—able to leap over governmental red tape and regulations?

In politics, where there is a will there can be found a way. As special librarians, you must put your needs on the agenda of government. "Politics" has been aptly described as the "art of the possible." Your message must get across to the political world.

Are you content to have government action imposed upon you and/or your library? Will decisions about postage rates be made without letters to your congressman to put him on notice of the effect that it will have on interlibrary services as well as the cost of periodicals? Will decisions be made without your input? **Are you willing to be mere spectators in the drama of your lives? Lobbying is a time-honored technique. Learn and use that part of the game.**

Know the Game

As librarians you must become agents of change. This will not be easy. David Easton said: "To know is to bear the responsibility for acting and to act is to engage in reshaping society" (4). You have the numbers and therefore the potential power to get into the game, to place, kick, or pass.

Abraham Kaplan states: "The American morality of power is under continuous tension between our moralization and our vulgar pragmatism. The uneasy equilibrium between what we think of as 'idealism' and 'realism' periodically gives way to one tendency or the other . . . Power is to be used by men of conscience and integrity for the common good, and its exercise guided always by the ideals of justice and humanitarianism, sympathy and fair play. . . " (5).

In conclusion, I quote from a recent commentary by Hugh Sidey in the May 14, 1979, issue of *Time*:

> . . . Politics is struggle that purges a system. When properly managed, it is the substitute for aggression and war. It is corrupt in spots, but also it is a way to infuse higher ideals into national affairs. Politics remains the only process through which we can achieve order, obligation, survival, freedom.
>
> . . . Politics is the way ahead in this nation. It is a collection of yearnings put together to make a majority that gives purpose to thought and turns theory into action. Politics is movement, mission, protest, the creative tension, whence comes direction. We do not need less politics, we need more politics—good politics (6).

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Image-bearing Catalog Cards for Photolibraries

An Overview and a Proposal

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■ **Routine demands of publishers, film makers, and a "reading" public which is fast becoming a "seeing" public have trebled and quadrupled the number of requests for pictures. As the importance of these visual materials increases, the need to improve finding aids for more effective access becomes more acute. The retrieval methods used by thirty-two key photolibrarians and archivists serving both governmental and nongovernmental agencies in Washington, D.C., are surveyed. As a viable and affordable alternative, the procedures used by one photolibrary, which produces uniform 3 in. × 5 in. index cards with caption and black/white or color images, are described in detail.**

WE LIVE in the midst of an enormous increase in the impact of visual materials on our daily lives—through the global communications media, through the worldwide publishing industry, in entertainment, in education at all levels, and in the governance of entire populations. Pictures are coming to be more important for all of us.

At the same time, the actual mechanisms by which images may be created, transmitted, recorded, stored, and recalled are undergoing radical transformation. There is a ferment of experimentation and realignment in progress. Already there is instant editing and page composition on cathode-ray tubes, optical typesetting, distant laser platemaking, nearly instantaneous development of color photographic film, IMAX, Intelsat, holography, electronic grid "fingerprinting" of paintings to encode identity, worldwide television net-

working by satellite, videotaping, computer generation of graphics, image banks, and so on.

And more is to come. Tomorrow's electro-opticals will produce cheap photocopies that will be virtually indistinguishable from original works of art or master photoprints. In addition to today's international microwave radio and TV networking systems, computer-generated graphic facsimiles of high quality (as well as digital information) will be transmitted from the terminal at a worker's desk, relayed and amplified by orbiting satellites, and received at someone else's desk terminal—cheaply and reliably.

In this "clickety-blink" future, there will be many more small publishers and individual producers. The multimedia publishers will be busier than ever. Excellent pictures of every medium and subject will be sent to audiences of all sorts, everywhere. Fiber optics will make picturephone visual service not only cheap but also free of electromagnetic interference, so that a photoresearcher in the United States will be able to show a client in Japan a range of vivid images for an immediate choice. The potential for language-transcending images to inform, to entertain, to educate, and to govern will expand as never before.

The Need for Finding Aids

With this expanding potential, the need for more effective access to the treasures of our common visual heritage will become increasingly acute. Already the routine demands of publishers, filmmakers, and a "reading" public that is fast becoming a "seeing" public have trebled and quadrupled the number of reference requests for pictures being presented to all our picture librarians and archivists.

There is a real and demonstrable need for improved finding aids for all picture collections—large and small, historic and modern—not only to make life easier for researchers but also to assist picture librarians and archivists to cope with the rising tide of requests for necessary visual documents.

Yet at the same time any proposed improvements in these finding aids must be simple, inexpensive, reliable, and within practical reach if they are going to be adopted by most libraries and archives. This paper proposes exactly these sorts of improvements: evolutionary changes which are not beyond the reach of today's technologies and today's budgets.

First, several catalog cards, or substitutes for cards, now in use in a number of Washington, D.C., libraries and archives will be examined, in order to sample some of the numerous systems that have been devised for the control of visual materials. Then one system will be examined in some detail which may provide a new model for a more satisfactory picture cataloging method.

Historically, photolibrarians and archivists have devised a wide variety of systems to catalog and control the holdings for which they are responsible. Since by definition it is probably fair to say that the verbal cataloging of visual materials is impossible, it should not be a surprise that no single system of control has been brought into universal use.

Photoresearchers in Washington, D.C., are now confronted with a wide spectrum of finding aids and cataloging systems, from the most primitive (i.e., none at all) to the most up-to-date (i.e., computer retrieval from an assembled image bank through keyboard stroking). Each of these systems is to some extent perfectly suited to the collection for which it was tailored, and each system is to some extent inadequate.

The following is a summary of interviews with thirty-two key photolibrarians and archivists presently serving both governmental and nongovernmental agencies in Washington, describing that critical, initial point of access to their collections—the card catalog, or its substitute.

The authors wish to stress that what follows is intended to be neither a complete description of the image-

retrieval system in use at each location described, nor a complete description of all photolibraries in Washington, D.C. This is just a sampling to demonstrate the wide variety of catalog cards now in use in various photolibraries.

Self-indexed Collections

In the absence of a card catalog—the situation in all but the largest collections—the usual indexing material is the photograph itself, self-indexed according to subject, photographer, date, place, accession number, or whatever other arbitrary tag is considered appropriate. Photographic collections making use of this self-indexing system of photos and slides include college and university slide libraries, public information offices such as that at the National Institutes of Health, and numerous museum study and documentation archives such as those at the National Gallery of Art, the Hirshhorn Museum, and the National Collection of Fine Arts.

Naturally, when photos are self-indexed in this way, the index can vary in size and complexity since 35 mm slides, 4 in. × 5 in. transparencies, and prints of all sizes are stored in their various appropriate containers, vertical files, and so on. This system can be the most charming and the least efficient to use, since the temptation to dally over irrelevant images is great, and no attempt is made to provide central informational access to multiple subgroupings of varying sizes and in various locations.

Certain photolibrarians have begun to provide these self-indexed collections with more or less complete "catalogs" of a sort, by assembling binders of photographs carrying key information. The World Bank Photo Library is outstanding in this regard, making use of a modified Dewey system of control for each slide in its large library. A shelf-list is maintained in binders, consisting of 35 mm images photocopied twenty to a page (Figure 1). A catalog to sets of slides but not to individual slides is comprised of 3 in. × 5 in. cards; at present these 3 in. × 5 in. cards carry no image. Another self-indexed collection, the Hirshhorn Museum Photo Archive, uses no cards at all, but punches and stores its documentation photographs (most 8 in. × 10 in.) in three-ring binders. Each photo carries a key number which in turn leads to complete caption information stored in a computer index.

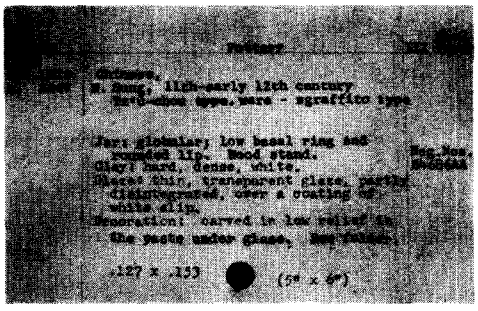
Figure 1. Part of a 35 mm image catalog shelf-list in use at the World Bank.

Other self-indexed collections provide access through microfiche views of the images, with caption information given on accompanying fiche. Two examples of this method are the Environmental Protection Agency's Documerica project, which started out with a flourish and is still in use, although no longer being expanded, and the Index of American Design, currently being filmed for future microfiche access.

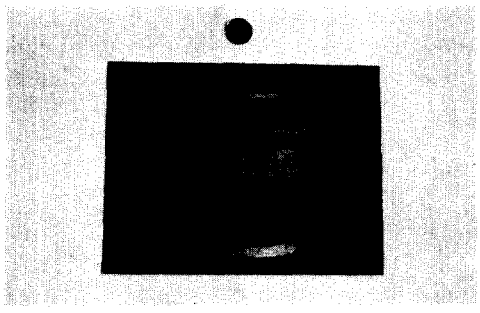
Catalog Card Systems

However, a better way to provide quick and certain access to massive files of stored images is to provide catalog

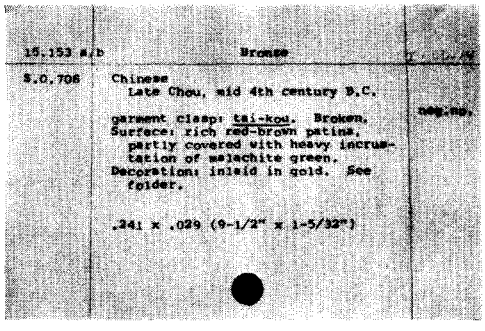
Figure 2. 4 in. × 6 in. catalog cards in use at the Freer Gallery of Art, showing images of various sizes mounted upside down on the back to facilitate research down a drawer-full of cards.



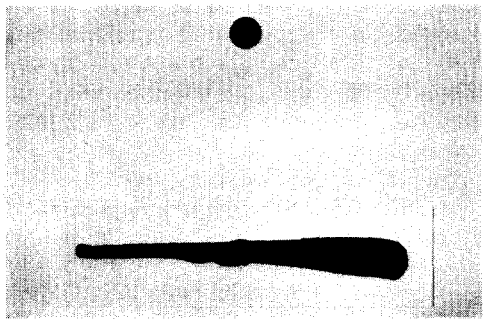
(Front)



(Back)



(Front)



(Back)

cards, as several photolibraries in Washington, D.C., do. However, there is certainly no standardization of card or image size, and indeed few carry any image at all.

Catalog cards without images exist in great numbers in the largest governmental and nongovernmental photo collections in Washington. These collections include the National Geographic Society Illustrations Library, the National Institutes of Health History of Medicine Division, the Library of Congress Prints & Photographs Division, and the National Archives Still Picture Branch, all of which rely on 3 in. × 5 in. catalog cards with no image. However, it should be noted that each of these major collections does provide illustrated books or other finding aids, annotated with negative numbers whenever possible, to expedite research, particularly in certain frequently called-for files.

These giant repositories are the sturdy workhorses of all still picture research in Washington, and most of their unillustrated 3 in. × 5 in. catalog cards will doubtless have to remain in their present form for the indefinite future for budgetary reasons.

Image-bearing Cards

Superior access to photographic holdings is provided by the handful of Washington, D.C., photolibraries that have been foresighted enough—and were well enough funded from the start of cataloging—to provide an image-carrying card for each photographic item of whatever form held in the

Figure 3. Image-bearing 5 in. × 8 in. catalog card in use at the U.S. Geological Survey.

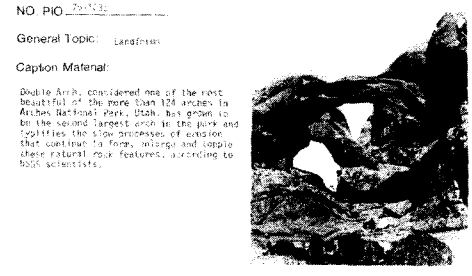
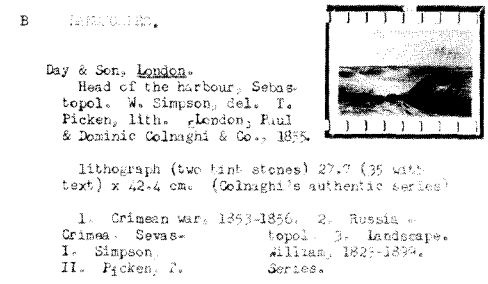


Figure 4. 3 in. × 5 in. catalog card from a discontinued file at the Library of Congress, showing dry-mounted image.



collection. Nearly all librarians and archivists interviewed at these locations use photographically reproduced images on their catalog cards in one way or another. To the best of our knowledge, only one uses photocopied images, and no one uses half-tone printed images.

In surveying the Washington, D.C., photolibraries that do use image-bearing catalog cards, we found considerable variation in both card size and image size. For example, The Naval Photographic Center and the Naval Historical Center print a photographic image (black/white or color) that may cover the entire face of a 3 in. × 5 in. catalog card, with only one line of key information typed at the top and the balance of the caption on the back. They also may photographically print both image and caption at once on the face of the card, as is done at the International Communication Agency. The Freer Gallery of Art uses a 4 in. × 6 in. card with all documentary information typed on the front, and with a photograph of whatever size is necessary on the back, dry-mounted upside down to facilitate research down a drawer-full of cards (Figure 2). It is interesting that the size of the image is so variable.

The Smithsonian Institution Division of Photographic History has evolved a different variation. The first of a pair of 4 in. × 6 in. cards carries most of the required verbal information; the second, filed directly behind it, carries some identifying numbers and a dry-mounted 4 in. × 5 in. print of the object being cataloged. This same office also uses 5 in. × 8 in. cards carrying small images to keep track of objects loaned out for exhibit or study. Finally, 5 in. × 8 in. image-bearing catalog cards with 3½ in. × 4½ in. images are in use at the Publications Division of the U.S. Geological Survey (Figure 3).

All of these image-bearing cards, of whatever size, satisfy the researcher's ultimate dream of quick, certain access to the principal item of interest: the image itself. These cards tie together in one place and in one format all the strands of a complex collection. They also help to keep down the number of trivial requests addressed to the overworked photolibrarians and photoarchivists.

Probably only the largest agencies or firms can afford the expense of producing these cards entirely photographically. Those who have tried dry-mounting small contact prints are not happy with that system: if the images are mounted uniformly on one side of a drawer-full of cards, they skew the file badly. Dry-mounted or glued prints do not always stay on: one curator has even resorted to staples. Figure 4 shows a sample of this sort of card from a small file in the Library of Congress which has been discontinued. The Daughters of the American Revolution Library has also stopped using dry-mounted photoprints. The Archives of American Art at

the National Collection of Fine Arts is phasing out those catalog cards that carry drastically reduced dry-mounted images of certain holdings.

An Alternative Image-bearing Card

As a viable and affordable alternative to these varied systems, this paper proposes as a model one photolibrary that produces uniform 3 in. × 5 in. index cards that carry both caption information and color or black/white images for transparencies and photos.

The following techniques and methods are being used currently by the International Communication Agency (formerly the United States Information Agency). The library is located at the Washington, D.C., headquarters of the agency and functions as part of the organization's Press and Publications Division (Figure 5).

The library's collection of 40,000 black/white prints and 20,000 color transparencies goes back to 1948 and illustrates the varied panorama of life in the United States—its people, its history and government, its culture, and scientific achievements. Materials are acquired by the agency's publications either through purchase of individual photos that have been published elsewhere or through assignments to staffers or free-lancers to photograph a specific place, person, or event.

By mandate of the U.S. Congress, the agency's products may be distributed only outside the United States. Photos received by the library from the agency's publications are available for use in agency-produced magazines, pamphlets, news packets, picture stories, exhibits, and other products prepared at the organization's headquarters in Washington, D.C., or elsewhere. These products are distributed through agency Informational and Cultural Centers abroad which work closely with, or are actually attached to, U.S. embassies and consulates.

The photolibrary provides photoresearchers with a card catalog showing an image for each print or transparency

Figure 5. International Communication Agency photolibrary showing reference area and one of six Sperry Remington Lectrievers.

Figure 6. Black white 3 in. × 5 in. index card.

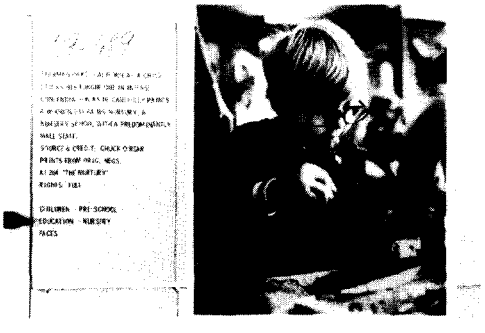
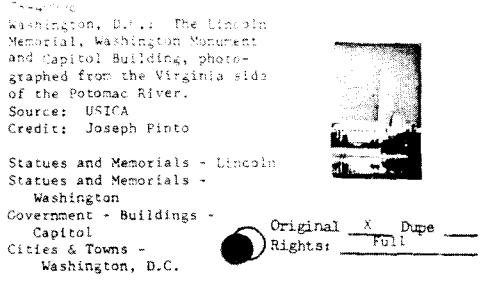


Figure 7. Color 3 in. × 5 in. index card.



and indicating whether the master is a duplicate or an original (Figures 6 and 7).

The catalog uses some 3,000 subject headings and 1,400 personal name entries. Cards for black/white prints include a 2 in. × 3 in. black/white image, and are filed chronologically by subject. Behind a red-banded card follow the cards for color tranparencies on the same subject. These include a 35 mm color image.

When a print or transparency is received, the library staff captions it and enters the pertinent information in a log book (Figure 8). Log books are maintained on an annual basis, with entries being assigned the next chronological number. The first two digits of the log number represent the year acquired; the remaining numerals identify the particular print or transparency. For example, log number 78-2000 (the official portrait of President Carter) is the two thousandth item acquired during the calender year 1978.

Captions include log number, place, description, date, source, negative (original or copy), agency use, rights and subject headings. Captions for black/white prints are typed on 4 in. × 5 in. blue bond sheets using a speech typewriter. In a small darkroom, caption and print are placed side-by-side beneath a Recordak Microfile Machine Model MRD-2 mounted at 14 in. (This machine uses Radiograph Microfile Film SP-495 with a capacity of 1,500 frames). A movable arrow is used to point to each subject heading as a frame is taken; an additional frame is taken for the shelflist file.

Microfilming is done biweekly (approximately 120 prints or 500–600 frames); the film is cut and the unused portion is left in the camera. Processing of the microfilm is done in the Press and Publications Division's Photo Lab, which returns a set of 3 in. × 5 in. cards to the library for each print processed. Each card is filed alphabetically under the subject indicated by the pointer, and the remaining card is filed chronologically in the shelflist file.

Figure 8. Log sheet with working copy of caption information.

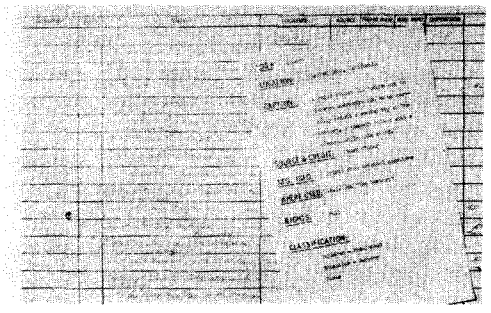
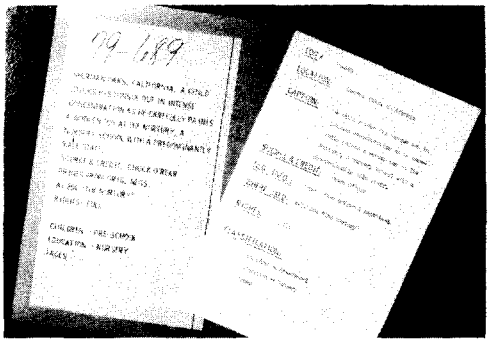


Figure 9. Caption mounted on the back of railroad grayboard with working copy of caption information.



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The master print is dry-mounted on a press to one side of an 11 in. × 9 in. gray railroad board; the caption is dry-mounted on the reverse side (Figure 9). The log number is printed on the top right side, then the print is placed in a removable plastic cover and filed under its log number in chronological order in automated Sperry Remington 100 Lectrievers.

For the library staff, production of the cards is a simple routine, but the lab must have special equipment for processing. Before the lab acquired such equipment in 1970, this work was done by Eastman Kodak and Biel Microfilm Corporation (1966 through 1970). Cur-

rently, the estimated cost per card is $.04, which includes materials but not staff time.

Color File Entries

Until mid-1977, when the color file was incorporated into the card catalog, researchers had available only a word description of color transparencies and the files were left open for their examination.

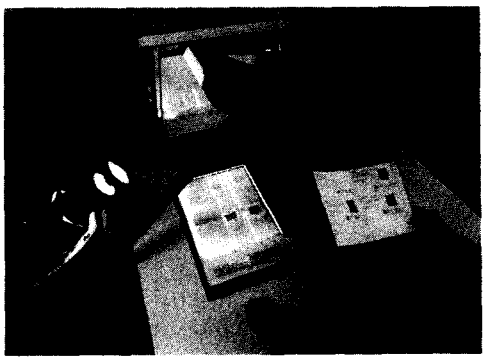
Working from 4 in. × 5 in. duplicate transparencies, the Photo Lab was able to produce a card with a 2 in. × 3 in. color image, but because of the plastic surface of the card, caption information often smeared and became illegible.

The Division's equipment included a color Xerox copier, so a system was developed which produced a card with a color image. Each transparency is captioned in the same manner as for a black/white print. The captions are typed on a pica typewriter on an 11½ in. × 8½ in. sheet that accommodates four transparencies with the same number of subject headings. The sheets are prepared by the Government Printing Office, which punches the holes for the transparencies and prints the information under the hole and the guide lines for the 3 in. × 5 in. cards. The sheets are the same size as the catalog card stock, which is perforated to form four 3 in. × 5 in. cards.

These sheets and duplicate 35 mm transparencies are taken to the color copier. The caption sheet is laid face down, then a mat for vertical or horizontal transparencies is laid followed by a heavy mat with four 2 in. × 2 in. holes. The holes are labeled 1, 2, 3, and 4, as are the transparencies. The transparencies are dropped into the holes emulsion side up, the card stock is loaded into the machine, and each sheet is copied as many times as there are subject headings plus two (one for the shelflist file, and another to accompany the transparency into the file) (Figure 10).

The perforated sheets come apart easily, leaving 3 in. × 5 in. catalog

Figure 10. Exposing color transparencies on color copier.



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cards. The subject under which each card is to be filed is underlined in red, and the cards are filed under their headings following all the black/white cards on the same subject.

One catalog card and the transparencies (master and duplicates) are placed in vinyl sheets (with a capacity of twenty 35 mm) and put in 8½ in. × 11½ in. manila envelopes with a 1 in. red band on the right. The log number is placed on the envelope which is filed in its chronological order with the black/white masters. The red band is used because the file also contains black/white work prints in manila envelopes.

In some cases library masters are 4 in. × 5 in., 5 in. × 7 in., or 8 in. × 10 in. transparencies. To produce the catalog cards, duplicate 35 mm transparencies are made in the lab and the master is stored in the same envelope as the duplicates in its own vinyl sheet (four 4 in. × 5 in. per sheet, or one 5 in. × 7 in. or 8 in. × 10 in. per sheet).

After the initial design of the caption sheets and the mats, this color card system became a simple routine complicated only by the color copier. When the library began this copying process, the machine often jammed and the color copy varied from excellent to extremely poor. Cooperation from the Xerox representative and technical staff, as well as the library staff's increased knowledge of how to use the

machine, have resulted in a sharp decrease in jamming and a more uniform image of the 35 mm slide. Color copy of this size results in loss of detail, but the composition is clear. Cost per card is estimated at $.12, which includes materials but not staff time.

Relatively small photolibraries wishing to adopt a similar system may control both cost and quality by contracting for this work (perhaps on some sort of timesharing basis) with a photocopying firm. Larger photolibraries with photo laboratory facilities would be able to support the entirely in-house operation.

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STEIN

An Activist's Approach to Continuing Education for Special Librarians

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■ **An activist's approach to continuing education requires devising a plan for career growth and designing a professional development program to acquire the competencies necessary to reach these goals. The paper includes six major themes: the requirements for information science in the twenty-first century; preparation for professional growth; mapping an individual strategy for continuing education; evaluating a continuing education program, and the economics of continuing education.**

As the twenty-first century approaches, forecasts and predictions for the future seem to multiply as quickly as online data bases. Some hold the future as predetermined, a linear extension of the past, basically unalterable. One implication of this deterministic view is that we study the future in order to make continuing education relevant to that future. The determinists adapt education to the scientific, technological, and societal changes which one attempts to forecast.

One can easily adjust to this adaptive method. Suppose, however, that there is only one future and that can be forecast with reasonable accuracy. Even under these conditions, a primary reason to know the future is to be able to *change* it. Too often continuing education is sought and accepted simply because the offering is so labeled. Continuing education is now the rage of all the professions and most of the universities. Recognize, however, the universities' response is in part a reaction to declining enrollments. Yet on an individual basis an eclectic collection of courses, institutes, workshops, or experiences may not add up to much in the long run.

In order to improve, expand, or redesign a professional role, continuing education may help. To effect change, set the stage carefully. Some of the futurists' theories may help in this process. One of the major tenents of futurism is that possible futures be systematically examined and a variety of alternative courses of action designed to suit each of these possibilities. It can then be determined which of these futures best suits one's own plans and predictions. Certainly this is not to recommend idle daydreaming or a Walter Mitty approach. Respected futurists such as Kahn, Weiner, Zeigler, and Blakeley developed models for examining or projecting what the twenty-first century may be like. Special librarians may adapt some of these models to determine their own professional future. The idea is to examine critically exactly where you wish to be in the next five or ten years, determine what alternative courses of action can help achieve this goal and begin to

construct a continuing education program suited to this goal. One major pitfall of this approach is what Sir Alfred North Whitehead labeled "the fallacy of misplaced concreteness." In other words, Whitehead contends that modern man plans and decides actions based on faulty, or even more serious, unexamined premises (*1*). For example, a special librarian will rarely consider becoming the vice-president of marketing or research as a viable alternative or career goal. One reason may be the unexamined premise that a librarian supplies information rather than generating knowledge. This example may or may not be accurate. The important point, however, is that special librarians and information scientists should seriously analyze the premises on which they construct plans for their own future.

The Future

H.S. Heaps in his work on information retrieval provides us with an idea of what the future may be. According to Heaps, "The concept of man as a solitary traveler through time with some interaction from other human beings, and later the concept of man surrounded by a mechanistic universe, may now be replaced by the idea of man as an information receiver. Since information does not necessarily relate to physical quantities or to precisely measurable terms, it might be speculated that techniques developed for information retrieval and information evaluation eventually should be developed in a direction leading to further understanding of the process by which human beings associate ideas and gain understanding of scientific and humanistic concepts" (*2*).

The new world of information services includes computer data bases, CRT's, on-line searching, microforms, communication technology, and Prestel, leading perhaps to the paperless office. The wave of the future, in terms of information gathering, seems to be in distributed data processing (DDP) which permits data processing to take place at separate locations yet provides the DDP units with access, via communications to each other and the central processor (*3*).

Technology is already a major part of the information industry. The question is does an individual wish to become a major force in the information industry or remain as only a small segment of it? Many special libraries like those at Price Waterhouse Boston Information Center, Exxon Research & Engineering Information Services Center, and at Xerox are in the forefront of providing information using all the technical tools available. As an extreme example, the special librarian needs to be as comfortable with the newest high-speed computer or word processor as, perhaps, the Book of Kells.

The U.S. Office of Personnel Management is already working on new classifications for an information professional group and an information manager series. Provisions in the new grouping are now under study at the University of Pittsburgh under an NSF grant. These new titles include information scientist, information technician/technologist, information specialist, information counselor, information architect, information engineer, and information administrator, among others. The information manager, and the anticipated establishment of other related information professional occupations of the kinds listed, reflect the need for new roles to match new opportunities as we enter the information age (*4*).

The problems, issues, and opportunities of information management will be among the most important facing American society in the next several decades. Already some have begun penetrating the general consciousness of the nation, but most are still too little known and understood even by those already in the information field. The emerging discipline of information management—the means whereby the technologies and techniques of information handling will be controlled and

directed will provide major challenges and opportunities for organizations of all kinds, as well as their managers and information specialists. The new breed of information managers should be well versed in assessing the value and effectiveness of information, comfortable with the variety of information handling processes, understand networking both internal and external, and realize the importance of and possess the skills to measure the cost of information functions. Consider carefully the options of an information manager when thinking about continuing education. Taking an activist's approach means, among other things, making a critical appraisal of the available offerings. It also means using continuing education to mold a new career slot.

If an individual plans to alter his position, he must make purposeful choices of ends and means to reach that goal. This includes developing a continuing education program using systematic analysis to plan, evaluate, and adjust that program as progress is made toward the goal.

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Moving Ahead

Continuing education for special librarians should take as its standard rallying cry not racing to keep up with the past but moving ahead to the future. One can now ask not what will the future hold for special librarians but how can an individual plan a continuing education program to affect a viable and self-defined future. Certainly as any facilitator or change agent will tell you, one individual can effect only a certain amount of change. However, special librarians as a group can effect change in the library and information business by carefully planning the future. Continuing education can play a major role in that change.

The framework for continuing education for the future must deal openly with the necessity to identify, specify, and choose among alternative sets of educational goals as these relate to the possibility, plausibility, and desirability of alternative states of affairs. Special librarians need to plan and direct the future carefully and work hard to eradicate some of the less desirable perceptions attached to the profession.

Leslie Wilson, honorary member of SLA and director of Aslib, in his Valedictory to Aslib, discussed the need for change in the profession.

> The complaint has become almost traditional among librarians and information officers that management has no interest in information, indeed that it grudges the money it spends on its acquisition and internal distribution. I readily admit that it is difficult not to feel some sympathy with that point of view, particularly when one confronts the apparent insouciance with which some managers have truncated or disbanded their library and information units during the years of economic recession. Those are times, one can well argue . . . when the efficient information unit could make a major, and perhaps even a critical, contribution to company effectiveness. Nevertheless, we do all have a collective responsibility not only to consult our immediate professional interests but also to look *strategically*, if we can, at our various managements' objectives and the options open to them in their pursuit. In *strategic* terms the tendency has, I suspect, been all too often to ask the wrong question. Fundamentally, the point at issue is not whether company librarians have failed to receive adequate management support, but whether managements have failed to make proper and effective use of the

information upon which attainment of their commercial objectives depends. . . . But at the heart of the matter, I suspect, are the beliefs, all too often reinforced in practice, that librarians only produce documents, and that they neither think commercially nor have the benefit of training which has anything to do with the need to exercise commercial judgment in assessing the relevance of information to management decisions. . . . If, as I believe, management consists of the effective deployment of a resource in pursuit of defined objectives, the information function properly belongs as a discrete element in the management structure . . . (*5*).

Librarians and information scientists if they wish to bring their departments into the mainstream of management must change their outlook. It has become evident that the disciplines related to the effective management of large organizations must now include at least portions of the behavioral sciences, statistical analysis, social psychology, group dynamics, systems analysis and model building, operations research, economic analysis and new approaches to accounting and budgeting. According to Herman Fussler, "Although many libraries and library systems have become large and complex enterprises, the formal programs for the professional education of librarians have, in general, given a relatively small percentage of the available time to content designed to achieve a high level of management proficiency" (*6*).

In the past ten years continuing education or human resources development, the catch word of the seventies, has received increasing emphasis. Theorists like Likert, McGregor, Argyres, Herzberg, and Drucker developed sound theoretical frameworks on which corporations constructed training programs. Even the Educational Testing Service plans some new projects in management training. In the library field, Elizabeth Stone and Barbara Conroy adapted many of these theories in espousing the cause of continuing education.

A Better Way

A wide spectrum of people insist that continuing education is necessary for the profession. We hear over and over again that knowledge and professional training gained by a graduate is obsolete fifteen years, or even less, after graduation. The principal purpose of continuing professional education is to help the practitioner maintain and improve competence through continually updating knowledge, skills, and attitudes. Some even insist that professional societies should require participation in continuing education programs as a condition for membership (*7*). Unfortunately, however, many people do not look deeply enough into the continuing education process.

This process can be an important means of producing organizational change. Continuing education in the library profession has only recently gained widespread acceptance. In addition, the value of the continuing education experience goes largely unmeasured. Usually, the special librarian takes courses that are relevant to a particular individual interest. There is, however, a better way. Charles Martell and Dick Dougherty examined this "better way" in a recent article in the *Journal of Academic Librarianship*. "Continuing education then can be viewed from two perspectives. First, and rather pragmatically, it is a fringe benefit to the employee. Some employees would use coursework to improve career opportunities. Others would use it to develop new opportunities or new aptitudes. The second perspective suggests that continuing education can be selectively used by the administrator and the

employee in a consultative process the purpose of which is to further organizational role and job-centered career aspirations"(*8*).

If one accepts the idea that this is the time to expand the concept and role of the special librarian and accepts the premise that the well-planned continuing education experience can alter the future, then the issue becomes the design of the plan. A competent decision-maker should be able to specify what information is needed, should be able to get that information, and should be able to use existing information effectively (*9*).

The logic of mapping a strategy for continuing education demands that an individual determine his career goals and options. Take a lesson from the futurists and begin to forecast the state of library and information science in the twenty-first century. A good technique to examine alternative futures is the Delphi method. Dalkep and Helmer, mathematicians at the Rand Corporation in the early 1950s, designed the method and philosopher Abraham Kaplan suggested the name (*10*). The technique solicits from experts the likelihood of certain events occurring in the future. A questionnaire listing alternatives is sent to a panel of experts, each of whom rates the events. The process is continued until a consensus is reached. At each round, the person is asked to evaluate his choices in light of the other's opinions. Each participant is asked to justify any choice which falls outside the group's rating. After a few rounds some interesting projections of the future of the profession should emerge.

Using these projections one can determine the skills necessary to succeed in a given situation. For example, one optimal forecast might be that the information centers for the energy industries will be the central point where decisions on exploration and conservation will be made. For this situation a person needs skills in sorting and retrieving enormous amounts of information, managerial skills for directing work flow, coordinating the work of specialists, and a sense of the economics of the industry, or as Leslie Wilson implied, a commercial instinct. Now one can begin to construct a concrete plan, picking and choosing carefully from a wide market place.

Once an individual continuing education plan is developed, it may be wise to share it with a manager or personnel specialist. This suggestion to share the information is predicated on the supposition that the plan is mutually beneficial to the organization and the employee. Design the plan based on competencies. This approach makes more sense; furthermore, the whole idea of competency-based education is currently popular in some sections of the United States.

The competency approach encourages a person to master certain defined skills which can be measured and evaluated. These competencies are really subdivisions of a program. For instance, a manager usually needs certain skills in personnel matters. Personnel management as a field of study can be broken down into counseling; interviewing; interaction among peers, subordinates, and superiors; labor relations; knowledge of benefit packages; government regulations; social psychology; and needs theory, to name the more important aspects. Once the necessary competencies are established, look for courses that cover these specific needs. Usually the objectives and topics covered list the specifics of the course. Design a tailor-made curric-

Most important, however, is that the continuing education experiences, when well thought-out and designed, shape a new future for the individual. A future that was planned and did not just happen.

ulum and share the plan with colleagues and managers. Be sure whenever possible to bring back to the job tangible evidence from a course. This may consist of handouts, bibliographies, or resource materials. The more an individual is able to share knowledge, the more valuable and visible he becomes. In addition, these actions indicate the real value of continuing education to the organization. Two additional advantages to sharing continuing education plans are: 1) It establishes the special librarian as a serious-minded person interested in advancing and working hard toward the next step; and 2) Equally important, the document may serve as evidence for an individual to deduct education and training costs from income taxes.

Caveat Emptor

Continuing education seems to be available from every imaginable source: professional associations and societies; colleges, universities and high schools; trade associations; federal, state and local government; proprietary institutions; and independent consulting firms. Unfortunately, a portion of the material belongs in the waste basket. Rather than relying simply on graphics to decide, there are ways to determine whether a program is of value. First, an individual should ask whether a particular offering fits into his plan. Will this particular course or institute provide the knowledge, skill, or introduction to an area essential for professional growth? Will it offer a credential necessary for advancement? Realize, after all that ours is a society enamored of credentials.

Certainly as anyone who has ever spent time writing catalog copy will tell you, a course description is merely, as Hamlet answered Polonious' question, "What do you read my lord? Words, words, words." Look beyond the words to the organization and the instructor. Is this course part of a series; a one-shot attempt at a marketable topic, or a topic particular to the sponsoring organization? Certainly no one questions the American Institute of Certified Public Accountants' courses on new accounting techniques or SLA's courses on information science or the Association of American Publishers' courses on sales forecasting for the college textbook market. Where questions do arise are with the general topics of management and communication. Do not hesitate to ask about an instructor's credentials. Check whether the instructor publishes in the field or is known by other experts. Ask colleagues if they have ever attended a course with the prospective instructor. Any organization serious about its continuing education program will gladly provide information on the instructor's background.

Another important point which is often overlooked is the level of the course. Some organizations offer superb institutes for the chief executive level. However, when these organizations move to middle management, quality seems to suffer. The same may be true in reverse. Usually professional associations with a defined target population in mind, can offer courses specifically designed for its members. This is in part a commercial message for SLA's courses; but it is also a recognition that those who can define and project the needs of their clientele are in a better position to provide useful continuing education experiences.

Consider practical matters such as timing, location, and general approach to technical details. Be suspicious of slick advertising and grandiose promises. It simply is not possible to learn all there is to know about word processing, management theory, sales forecasting, or information retrieval in one day, one week or even one course. Carefully analyze the specific goals of the course. Do any of these goals fit with the plan of action? If not, pass it up.

One whole area yet to be covered is home study. In the library field Betty Stone is an important supporter of this method for continuing education. A somewhat analogous program in New York State is the Empire State College.

Programs such as these require a great deal of personal motivation and often a good deal of work to convince management of the value of some of these experiences. The concept of home study or correspondence courses is, however, expanding. Perhaps in the near future awareness and acceptability of this approach will increase.

Economics

Acceptance of a continuing education plan leads to the question of economics. While few will argue with the philosophical tenent that learning is good, many will question severely the dollar value of education. Perhaps, in no small measure, the relationship of learning and education is often blurred.

Nonetheless, continuing education is a costly matter and one should view it in economic terms. Continuing education should be personally cost effective. The results should demonstrate, in concrete financial terms, the value of the experience. These may be in the form of tax deductions, higher salary, or better, more efficient approaches to problem solving.

Most important, however, is that the continuing education experiences, when well thought-out and designed, shape a new future for the individual. A future that was planned and did not just happen.

In conclusion, Muriel Regan, President, New York Chapter, SLA, may have suggested the right title for this discussion: "Continuing Education: How to Take It without It Taking You." If a continuing education program is designed with a clear idea of the individual's plans, then an activist's role will be adopted and no one will be taken by continuing education.

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1. How well do you feel *Special Libraries* meets your professional needs? (Circle one.)

   (high) 5 4 3 2 1 (low)

2. Do you feel that *two* publications, one devoted solely to articles and one devoted primarily to news items, would be of more use to you? (These two would be available at no extra cost)

   yes ☐
   no ☐
   uncertain ☐

3. How many issues of *Special Libraries* do you read a year?

4. In what order do you read the sections of *Special Libraries?* (list 1–6)

Abstracts of Papers	Papers/Articles
Classified Advertising	SLA News features
Display Advertising	Vista features

5. Do you think the section you designated as "one" should be given more emphasis?

   yes ☐
   no ☐
   uncertain ☐

6. Do you rely on *SL* to help you solve problems relating to your day-to-day job functions?

Experimental research	☐	☐	☐
Extensive SLA Committee reports in essay form	☐	☐	☐
How to be a better Chapter or Division officer	☐	☐	☐
Library education	☐	☐	☐
Libraries in other countries	☐	☐	☐
Management skills	☐	☐	☐
Marketing your library/public relations	☐	☐	☐
New technology in libraries	☐	☐	☐
Philosophy of librarianship	☐	☐	☐
Profiles/history of individual libraries	☐	☐	☐
Pro and con discussion of issues facing special libraries	☐	☐	☐
Records management/archives and the special library	☐	☐	☐
Role of the information manager	☐	☐	☐
State-of-the-art reviews	☐	☐	☐
Systems or ideas that have helped a colleague	☐	☐	☐
The problems of one-person libraries	☐	☐	☐

Other _____

In this second section, we wish to gain information on the audience we are serving. The information obtained will help us develop a profile of our readers so that we may better serve their interests.

17. Would you purchase *SL* if it were sold by subscription only?
    - yes ☐
    - no ☐
    - uncertain ☐

18. Are you an individual member of Special Libraries Association?
    - yes ☐
    - no ☐

19. In what kind of library do you work? (Please check one category in *a* and one in *b*.)
    a. Industrial ☐
    Commercial ☐
    Academic ☐
    Governmental ☐
    Special department of a public library ☐
    Library school faculty member ☐
    Other (includes retired, unemployed, student) ☐

    b. For profit ☐
    Not-for-profit ☐

20. How long have you been employed in a special library? _____

21. What is your primary job function?
    _____

22. What is the subject area of your library?
    _____

23. What is the subject area in which you are most interested? _____

24. How long have you been in your present position? _____

25. Indicate highest academic degree attained.
    _____

26. When you list your accomplishments, do you include authorship of an article?
    - yes ☐
    - no ☐

27. What other library periodicals do you read regularly? (Please circle choices.)

Library Journal	College & Research Libraries
Wilson Library Bulletin	College & Research Libraries News
American Libraries	Medical Library Association Bulletin
ASIS Journal	Medical Library Association News
Canadian Library Journal	
IFLA Journal	
LJ Hotline	

Other _____

28. Additional Comments:

Automation and Its Impact on a Transportation Library

Robert C. Emmett

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■ **This paper describes the Northwestern University Transporation Library's experience with cataloging before and after implementation of an automation system. The costs and effects of the system are measured. Finally, implications for the creation of a publicly accessible union catalog of major transporation libraries are discussed, as well as a possible linkage of such a catalog to the existing abstracting and indexing services.**

AS A SPECIAL LIBRARY the Northwestern University Transportation Library is somewhat unusual in its position within a large academic research library system. The library was founded in 1956 by the Transporation Center, an interdisciplinary training research and service organization within the university. Three years later the library began to serve the needs of the Traffic Institute, a unit of the university devoted to professional continuing education and research in the areas of traffic law enforcement and safety and police administration. In 1971 direct administrative responsibility for the Transportation Library was transferred from the Transportation Center to the University Library system. This change in organization has allowed the library to participate more broadly in the resources of the University Library system, particularly in automated cataloging.

The Transportation Library has always attempted near comprehensiveness in its main area of interest, the socioeconomics of transportation. Other resources of the University Library system have been relied upon for transporation engineering and general materials in management and the social sciences. Hence, while being self-contained in most of its technical operations and printed materials, the Transportation Library has had a long history of close cooperation with the University Library.

Presently the Transportation Library's collection includes approximately 90,000 books and technical reports, 27,000 pamphlets, and 16,000 annual reports. The library currently is receiving about 900 periodicals. In the course of a year, over 6,500 articles and conference papers are indexed.

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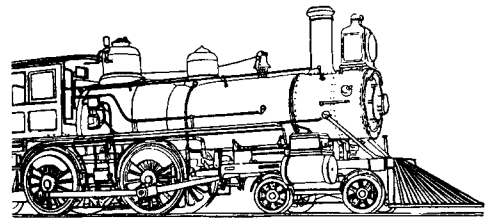
The library staff consists of 4 librarians, 3 library assistants, and 3.5 FTE student assistants grouped into the functional areas of administration, ordering, monographic cataloging, serials control and indexing, and reference and public services.

Since its inception, the Transportation Library has had a formal charge from its founding organizations to serve the transporation community outside Northwestern. Beginning before the age of national services and networks, the library has published "Current Literature in Traffic and Transportation," a monthly accessions list of books, reports, and articles. The library has also compiled and distributed topical bibliographies on a wide variety of transportation and law enforcement subjects. The library's card catalog was published by G. K. Hall in 1972. In keeping with its mission to serve research and planning outside the university, the Transportation Library has always been open to business, government, and other universities for reference and loan of materials.

As individuals serving one of the major, national multimodal transportation collections, the Transportation Library staff has actively participated in the design and implementation of national transportation information services through the U.S. Department of Transportation (DOT), the Transportation Research Board, and the Transportation Division of the Special Libraries Association. Beginning in 1976, the Transportation Library was awarded a contract to serve as a document delivery and referral center for TRISNET, the DOT-funded Transportation Research Information Services Network. The contract, which was also awarded to the University of California's Institute of Transportation Studies Library, provides for the deposit of paper copies of DOT-sponsored research reports, a subscription to all National Technical Information Service microfiche on transportation, and supervisory and clerical support. In the most recent year of this service, the library received



3,000 requests for documents, resulting in over 2,100 loans and photocopies and almost 900 referrals.

Cataloging Automation

Prior to initiating participation in the Northwestern University Library automation system, the library cataloged approximately 5,000 volumes of monographs and serials per year. Although statistics were not kept by title, this represents about 3,000 monographic titles. In 1977, the library began to accumulate a large backlog in cataloging, in part due to staff reductions and the increased volume of accessions resulting from several major gift sets.

In the manual cataloging system, the cataloger prepared preliminary slips for each book in the final card format. Descriptive cataloging and choice and form of entry were done according to an internally developed format. Subject headings were assigned from an in-house thesaurus; classification was based on a locally revised and expanded version of the Library of Congress schedules. After final review, clerical and student staff typed and filed each card.

This arrangement worked smoothly, if somewhat slowly. In a collection overwhelmingly comprised of technical reports, the method allowed for main entry by performing organization with full description of features such as report number, tables, illustrations, and bibliographies. The preliminary slips could be collected conveniently and organized each month to provide copy for the library's current accessions list.

The main problem with this system was the time-consuming nature of

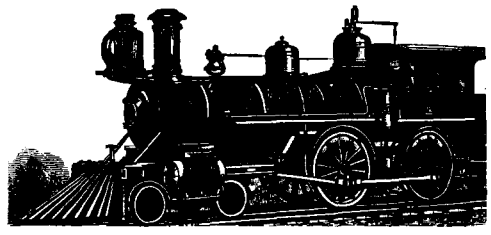
manually typing accurate card sets. After losing access to a card reproduction machine, large backlogs in typing caused long delays before cards were filed in the catalog. In-process and recently cataloged materials were difficult to locate. Because of the typing problem, added entries were made sparingly, resulting in no personal author or title access for most materials. The increasing quantity of materials received by the library made it clear that a change was necessary.

Two automated systems were considered, OCLC and Northwestern's NOTIS (Northwestern On-line Totally Integrated System). OCLC's strength lay mainly in its ability to capture cataloging copy already input by other transportation libraries (at that time primarily the DOT Library). NOTIS's strength lay in immediate availability, close contact with the Systems Office staff permitting some customized applications, future potential for article analytics and computer-typed accessions lists, on-line serial check-in, and, last but not least, the University Library's willingness to absorb the cost of the service.

What NOTIS could not provide was access to cataloging copy for the great majority of our materials which are not in MARC. Only 5 to 10% of our accessions are commercially published monographs listed in MARC. It was felt that in time this would be remedied by access to a broader national library data base. A related problem with the adoption of NOTIS was the necessity of adjusting the library's descriptive cataloging rules to meet the high standards of the University Library. The future implementation of AACR 2 also raised the problem of two changes in cataloging rules for the library, first to AACR 1 and then to AACR 2.

The NOTIS Choice

The two outstanding features of NOTIS are its full LC-MARC compatibility and its integration of a variety of library functions including acquisitions



and cataloging, serial check-in, and circulation. While the Transportation Library is presently only using the system for cataloging, it is helpful to describe briefly all these functions since they affected the decision to adopt NOTIS.

The NOTIS system, first implemented in 1970, is presently running on an IBM 370 model 138 computer with 512 kilobytes of central processor storage. This computer is also used by the university for administrative data processing. For about the same costs, NOTIS could also be run on a smaller, library-dedicated IBM computer.

Since NOTIS was developed in-house without outside funding, the system was planned in a number of modules that could be brought up and revised independently. The system was also designed to run as efficiently as possible using assembler language, sharing records for different functions, combining batch and on-line operations, and using data compression techniques to minimize storage requirements.

The circulation module allows for instantaneous recording of books charged and discharged. Users can charge books out at staffed or self-service terminals throughout the library. The system automatically produces fine, overdue, recall, and book-available notices, as well as quarterly lists of books charged to faculty and carrels. The system maintains on-line the names, addresses, and status of all borrowers and can block charges to a particular user.

For two years there has also been a self-service terminal near the card catalog where a user can determine if a

specific call number is charged out. A public, on-line author/title catalog is currently in the test stages. Terminals are also widely used by bibliographers and by public services staff for reference, reserve, and interlibrary loans.

The Technical Services module supports three major functions: acquisitions, cataloging, and serial control.

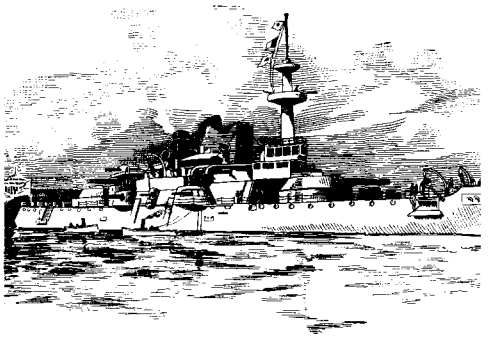
Bibliographic data—either captured automatically from the MARC tapes, input from printed LC sources (such as NUC), or input directly from other sources—form the basis of a bibliographic record that is then used to generate a purchase order. All order information is contained in an order record linked to the bibliographic record. No hard copy order files are kept. When a book is received, this is noted in the computer, payment is recorded, and a worksheet is printed for the cataloger to complete the cataloging process. A variety of claim notices can be generated for orders not received.

The serials control aspect allows individual items as received to be checked in on-line into the order record. The system produces a daily list of overdue items which is then used to request computer-printed claims. As bound volumes are added to the collection, they are noted in a volume holdings section of the bibliographic record. No manual serial records are maintained.

Bibliographic Services

Bibliographic information is displayed in one of two modes. One format consists of full bibliographic data, complete with MARC fixed fields, tags, indicators, and subfield codes. The other format contains only enough bibliographic data to identify the work, followed by a list of copies, complete with location, call number, and detailed volume holdings.

Access to records in NOTIS is by one of three means: the computer-generated record number that appears on all printed output, an ISSN if known for serials, or a unique, browsable author/title index. This index has proved to be a vast improvement over the search key access used in the earlier version of NOTIS. When a new record is input the index is updated instantly with main and title entries. Periodically the entire index is regenerated off-line to incorporate all new author, title, and series entries. An index search produces a display of all records that match. Each record is abbreviated to one line on the screen showing holding institution, corporate or personal author, title and date for monographs or place of publication for serials. Authors and titles are truncated to fit the line. An unusual and useful feature is that the index gives access to the lowest as well as the highest element in a compound corporate main entry. For example, "United States—Urban Mass Transportation Administration—Office of Rail Technology" is accessible under both United States and Office of Rail Technology.



NOTIS currently has more than 300,000 records available on-line, representing virtually all titles cataloged during the last eight years. The entire MARC data base is maintained off-line but is processed nightly to effect record transfers to the outline file. Current annual statistics for the system are as follows:

- titles cataloged: 40,000;
- cards printed: 500,000;
- purchase orders printed: 20,000;
- claims printed: 12,000;
- worksheets printed: 100,000;
- volumes circulated: 400,000;
- periodicals checked in: 90,000.

At the present time the Transportation Library is only using the cataloging and card production functions of NOTIS. Even this limited implementation presented some initial problems. As stated above, the Transportation Library's descriptive cataloging was based on internally developed rules. Northwestern University Library policy required the use of AACR and the International Standard Bibliographic Description. The latter presented only a cosmetic change from the library's previous card format. AACR, however, was quite different from the library's long-established practice of using performing agency as the main entry for reports. The changes for AACR 2 seemed to require the library to adjust its cataloging rules twice in a relatively short time.

A Flexible System

One of the great advantages of working with a small, local automation system is flexibility. In June 1978 the Systems Office set up a provisional file for the Transportation Library to use in producing cards according to its old rules. These records could later be revised to AACR standards or deleted from the data base. Commercial monographs could go permanently into the data base, since the library's cataloging practice for them was close to AACR. This provisional file allowed the library to use the computer to generate cards for a backlog of about 2,500 titles in summer 1978. Full card sets were also prepared for about 1,000 annual reports and 950 periodical titles.

The library has now begun to catalog using AACR 2. The author/title card catalog should be replaced with a public on-line catalog by autumn 1979. The programs already exist but the library is waiting until procedures are revised to permit added entries to be made in the index on a more frequent basis. Plans are also underway to bring up the preliminary version of the MARC analytic format to allow periodical articles and conferences papers to be added to the data base. At that time all cataloging and indexing will be on the computer and it will be possible to have the accessions list machine typed. NOTIS is currently producing a similar list of the University Library's Africana acquisitions.

The Effects of Automation

It is difficult to estimate precisely the impact of this automation on the quantity of cataloging. The year before automation began was not typical for the library. A seven-month vacancy in the cataloger's position and the earlier loss of a second cataloging position allowed large backlogs to develop. As yet the on-line system is still new, so that much time is devoted to learning, testing, and training. Before using NOTIS the Transportation Library cataloged about 3,000 monographic titles yearly. When automation is fully implemented the staff expects to catalog about 4,800 titles per year with a staff of one librarian, one library assistant, and one half-time FTE student assistant. Currently a large number of records are being entered into the system in preliminary form, with complete cataloging being delayed. Because of this the recent volume of work can best be described in segments. In April 1979 the cataloging unit processed:

- preliminary entry: 294 titles;
- descriptive cataloging: 185 titles;
- subject headings and classification: 141 titles.

A single title may be included in more than one of the segments depending on its position in the work flow. This segmented cataloging procedure has been successful because NOTIS's on-line index permits immediate access to in-process records.

The next major step will be the automation of the library's indexing procedures in fall 1979. The library prepares more than 6,500 journal and conference proceeding analytics per year. Entering these into the NOTIS system will further ease the typing load and will allow computerized preparation of the

library's accessions list. This by itself will save almost tweny hours of staff time per month.

The dollar cost of the Transportation Library's participation in NOTIS is difficult to determine. The charging algorithm used by the Adminstrative Data Processing Department is imprecise, and the University Library has not charged individual departments, such as the Transportation Library, for their share of the computer development or processing costs. Furthermore, because of the integrated nature of NOTIS, it is misleading to consider the costs of any one function separately. In contrast to OCLC, NOTIS depends on "economies of scope" rather than "economies of scale." The computer costs of original cataloging for a single title range from $.48 to $.78 depending on the number of operations performed and cards and worksheets printed. This includes overhead for the operation of the computer installation but not for the salaries of the 3.66 FTE professionals in the University Library's Systems Office. If a transfer from MARC is made, $.80 should be added to cover processing and maintaining the MARC files. To the total must be added the ongoing cost of storing records, now computed at about $.085 per year. This is an old figure that reasonably can be expected to be revised downward to $.02 to $.03 cents per record. In contrast, for ILLINET members the OCLC cost of cataloging one book using an existing record and producing five catalog cards is currently $1.81. Even if the machine cost of NOTIS is less, it must be remembered that it takes more labor to catalog on NOTIS because most of the cataloging is original. On a trial basis, the library has been acquiring main entry cards from the DOT Library and using them as a source of cataloging copy. The real cost savings from automation will come with the implementation of the indexing operation and the on-line author/title catalog.

In the longer range, the library expects to be able to use some of the cataloging records of other libraries through one form or another of a national library information network. One future enhancement of NOTIS that will affect this factor is an on-line authority file. This file will further simplify maintaining cataloging standards and eventually will provide cross references for the on-line catalog.

Implications for the Future

In many ways library automation is still in its infancy. Only the most basic operations of copying machine records and computer typing are used widely. Automated circulation systems are commonly available, but only recently have these begun to be linked with bibliographic data in an integrated fashion. Holdings information in OCLC seems to have stimulated (or at least redistributed) interlibrary loans. Just recently OCLC has implemented an on-line transfer of interlibrary loan requests but this is restricted ultimately by the absence of strict authority control. As yet no separate bibliographic utilities have pooled their holdings information for interlibrary loan purposes, although the Washington Library Network and the Research Libraries Group have recently announced plans to share their data bases. Continuing advances in the technologies affecting library operations such as smaller, faster computers, cost reductions in storage, and improvements in data telecommunications, guarantee that the impact of automation will grow and affect every library.

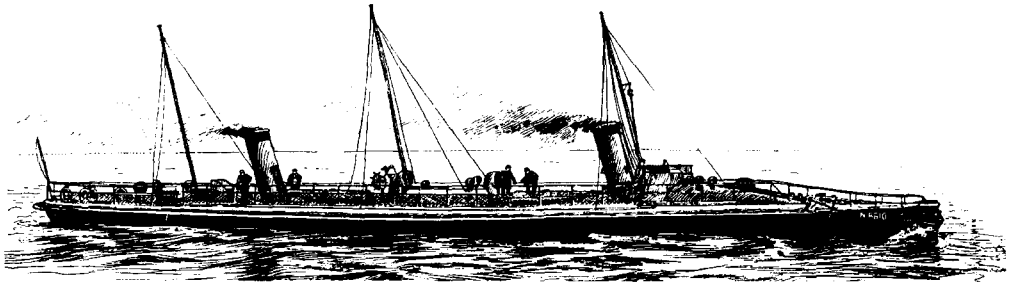
The existence of bibliographic records in machine-readable form presents tremendous implications for individual libraries. Suddenly the process of locating and copying authenticated cataloging records can be automated. The number of entry elements for a record can be increased without increasing the typing load. Large numbers of records can be transferred from place to place by tape. The existence of a library's bibliographic records on computer tape, plus the rapidly descending cost of minicomputers will allow even

quite small libraries to buy turn-key, on-line computer catalogs similar to the circulation systems of today.

Reductions in the cost of telecommunications such as wideband, high-speed lines, packet switching networks, and, in the near future, satellite communications systems, will make practical the linkage of the major bibliographic utilities and data bases (MARC, OCLC, Washington Library Network, and Research Libraries Information Network). Plans for a national library network comprised of bibliographic, authority, and holdings information are developing at a rapid pace. The LC Network Development Office, the National Commission on Library and Information Science, and now the Council on Library Resource's Bibliographic Services Development Program issue a constant stream of reports, proposed standards and protocols. The time is not far off when the major bibliographic utilities will be able to search for and transfer data directly from one computer to another. Of course, the potential is not the fact. In addition to the hardware and software problems, there are still major questions of network governance and fee structures. Some utilities may not wish to share their unique records and hence lessen their own market.

Decentralized responsibility for authoritative cataloging is perhaps the most far-reaching potential of a national library network. The COMARC project between LC and a number of research libraries, including Northwestern, was the first experiment in formally distributing responsibility for contributing to LC's data base. Northwestern currently is supplying the Library of Congress with original cataloging of Africana materials contributed by a number of libraries. The expansion of this level of cooperation virtually requires remote, on-line access to a master entry and subject authority file.

The Transportation Library looks forward to the time when it can share its records with other libraries, either for cataloging or for interlibrary loan and make use of the records created by libraries such as the DOT Library. Three scenarios for the future seem possible. In the first, the users of the various utilities such as OCLC would make their records available to each other through a direct utility-to-utility transfer. In the second scenario, the Library of Congress would collect, maintain, and distribute the authoritative data base for the country. The DOT Library would be designated the "center of excellence" for transportation and contribute authoritative records directly to the national data base. Other transportation libraries might also become secondary "centers of excellence" for specialized types of transportation materials.



In the third scenario, a centralized, national transportation data base would be established to collate the records of the major transportation libraries and make them available to others for cataloging or interlibrary loan purposes. This data base could be initiated by merging the library tapes of the DOT, Transportation Systems Center, University of California Institute of Transportation Studies, and Northwestern if problems of inclusiveness, standardiza-

tion, and accessibility can be resolved. Specifications for such a system would include remote, on-line access, authoritative bibliographic records, subject search capability, and holdings information. Such a data base could also be interfaced with the materials collected and analyzed by the transportation abstracting and indexing services to create a comprehensive, high-quality source for transportation information. The interlibrary loan advantage of having this information available on-line can hardly be overemphasized.

Conclusion

Automation of cataloging in the Transportation Library has improved immediate access to in-process and recently cataloged materials. It will soon make possible an on-line author/title catalog. More importantly however, the existence of bibliographic records of the major transportation libraries in machine-readable form offers the potential of improving services to all users of transportation information. Advances in computer technology and library software systems have made it feasible to plan now for the eventual integration of the existing, redundant services. A similar potential exists in most other multidisciplinary fields.

Acknowledgment

Mary Roy and Nancy Pope of the Transportation Library have provided invaluable criticism of drafts of this paper.

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Managing Reprints and Preprints in an Observatory Library

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■ **An ongoing project of cross-referencing reprint and preprint series distributed by observatories to the journal collection is described. Cross-referencing to the journal collection allows the library to maintain the intent of identifying work with a particular institution, but at the same time allows for considerable space savings and simplification of the collection by keeping a particular article in only one location in the library.**

OBSERVATORIES have relied on the exchange of reprints (*1*) for many years as both a way of publicizing their areas of research and also as a way of adding to the library collections non-reprint items available only on exchange. In the days when shelf space and budgets seemed unlimited, little thought was given to the redundancy of having articles from major journals available in various locations throughout the collection.

There was some justification for this, aside from the obvious "fleshing out" of a small collection. First, the *Astronomischer Jahresbericht* and its successor, *Astronomy and Astrophysics Abstracts,* to some extent have cited observatory reprint series, as well as providing the journal reference. D. A. Kemp, in his guide to the literature, noted the importance of the inclusion of the reprint series citations whenever possible since there are many instances in which such articles are more likely to be available in reprint form than in the original. However, he also noted in his preface the classic case of a paper that appeared in five different series and twice in report form (*2*).

A second factor was that many staff members tended to associate certain of their colleagues or particular types of research with a specific institution and therefore would "browse" in the exchange section for information. Finally, in some countries the practice of publishing in national rather than international journals meant that unless the observatory distributed reprints, much of its work might be unavailable

The National Radio Astronomy Observatory is operated by Associated Universities, Inc., under contract with the National Science Foundation.

outside the home country. So, observatories distributed reprints and librarians dutifully collected, collated, bound, and shelved in vast numbers.

The situation, however, has changed drastically. Few observatory libraries have either unlimited shelf space or resources for the continued wholesale acquisition and maintenance of great numbers of reprints. Many observatories, because of increasing costs for both the reprints and postage, have either discontinued distribution entirely or now distribute lists from which one selects specific reprints. Some observatories, with an eye to better serving the user, are distributing preprints instead of reprints. With publication delays of nine to twelve months from submittal to appearance in the journal, preprints are becoming increasingly more sought after by working astronomers. Preprints, of course, have been distributed informally among colleagues for years, but the new practice appears to be a formal system of preprint series distribution to libraries.

The demise of many reprint series and the substitution of lists of reprints have left librarians, who prefer things neat and orderly, in a bit of a quandary: how does one close out a series that is not *really* dead, but merely incomplete? If one is now receiving only selected reprints or a list of available reprints from an institution, how does one deal with a quasi-dead series on a catalog card? Since all reprints are no longer available, how are the remaining ones shelved? Does one simply toss them into a Princeton file to slosh about or bind them with notes advising that certain numbers were not distributed?

Incomplete Series

The problems touched upon above were exacerbated in the National Radio Astronomy Observatory (NRAO) libraries because they began acquiring these series in the 1950s when complete runs were seldom available. Then, in the mid-1960s, the collection was split because the administrative offices and main library were moved from Green Bank, W. Va., to Charlottesville, Va. Many observatories began sending copies of their series for both locations, but filling in back runs was even more difficult than it had been in the 1950s. When the series started being cut back, the NRAO library was faced with quite a situation: numerous broken series, dwindling shelf space, and an unkempt-looking exchange collection that was spread over two libraries. The temptation to discard them all was great; however, they were used on occasion. In addition, no one wanted to lay waste to the results of the efforts that had been expended in the 1950s and 1960s to gather these reprints.

A compromise was effected. Those reprints available in the library's journal collection were removed, but only after cross-indexing and referencing them to the journals. When staff members go to the exchange collection, they can find a list of reprints from a particular observatory with the citations to the journal articles. If the journal is one not in the collection, the reprint is kept in the same folder or notebook as the annotated list.

In some cases, this conversion was easy, since the observatory in question had published its own index, complete with citations. In such a situation, an asterisk was placed by the entry in the index for those reprints being kept because they had appeared in journals not in the NRAO collection. The indexes and the few retained reprints were then placed in a binder and shelved in the exchange section. For those observatories that published lists of their reprints without citations, the journal references were added and the previously described process was carried out. For those series for which no indexes could be located, indexes were created. Although this last method

involved considerably more work, it was felt that the savings in space and simplification of the collection was worth the effort. For some reprint series, a combination of these methods was needed.

We have been forced in some instances to effect compromises unnecessary for a library with a larger staff and more time to devote to the project. In most cases, no attempt has been made to track down reprints that were never received; therefore, many of the lists have gaps or begin at some point after number 1 of a series. In addition, bound volumes of reprints have not been destroyed. The library's shelf problems are not yet desperate, so the neat-looking volumes have not been moved. In the future, of course, these too may go. Finally, if an institution seems to produce its own list eventually, one was not created, so there are areas where there is a group of reprints that will be discarded eventually.

This procedure is for numbered series. Unnumbered reprints from observatories are handled in a slightly different way. Since it is unlikely that a user would have an institutional reference to an unnumbered reprint, all such copies were removed from the exchange collection; they were discarded if the library owned the entire journal. Reprints from journals not held are filed by first author in a vertical file in the Charlottesville library after a catalog card is made for the Green Bank library, with authors, title, and citation, so that staff and visitors there have access to this collection. Although the libraries are separated by 120 miles, a daily shuttle between the two installations means the resources of either collection are available within one day to any user.

The Preprint Problem

The proliferation of preprint series presents similar problems to those created by reprints. Herbert Coblans, in his book on the physics literature, refers to preprints as "that bastard progeny of priority neurosis and reproductive technology"; he considers them of little value to the scientific community (3). His opinion does not jibe with our experience in the NRAO library, for the preprint collection has always been one of the most active parts of our resources. At any one time, the library has 250 to 300 preprints, with about one-half representing NRAO papers by staff and visitors, and the remainder composed of papers sent to staff members and preprint series received from other observatories.

Although great strides have been made in some subject areas for dealing with preprints, most notably the "Preprints in Particles and Fields" and the "Antipreprint" lists produced by the Stanford Linear Accelerator Center Library, no similar service is currently available in astronomy and astrophysics. Simply discarding the preprint after a period of time or after its appearance in print was considered, but the increasing frequency of questions such as "there was a preprint here by so and so from such and such a place, what happened to it?" indicated that the series were being used and remembered *as series*. Therefore, a system was initiated for formal preprint series similar to that used for reprints, except that it is computerized. Upon receipt of a preprint, the author(s), titles, and observatory series numbers are added to a computer data set and cumulative alphabetical lists for the current year for each observatory series are generated and filed in the exchange collection. The preprints themselves are displayed in alphabetical order by first author on A-frames in another section of the library.

On publication, the citation is added to the computer list, a new observatory listing generated, and the preprint

discarded, unless it appeared in a journal not available in the library, in which case the preprint is kept after publication with the list in the exchange collection. In addition to compiling the listings by observatory, the data base is used to generate alphabetical lists of the most recent preprints received. These lists are distributed every two weeks to staff and selected observatories in the form of the RAPsheet (Radio Astronomy Preprint). Approximately once a month, we also distribute an unRAPsheet, which contains previously announced preprints with their journal citations. A cumulative alphabetical list of all RAPs and unRAPs for the past year is available for reference in the library.

Both of these listing activities have definite advantages for an institutional library in multiple locations (the NRAO now has five collections in four states). Since all series are not received in all locations, the librarians can still give access to them by simply photocopying the lists and distributing them as needed by staff and visitors. Although at present complete lists are maintained only in Charlottesville and Green Bank, the distribution can be expanded easily as the need spreads.

Finally, the earlier question of cataloging a series that may no longer be a real series must be discussed. The substituion of the lists for the actual reprints reduces the question to the simplest level: all of the ongoing series, whether ongoing literally or by distribution of a list of numbered reprints, are simply cataloged under institution's name with the bracketed note "list only," where applicable, following the entry. This method obviates the need for a long explanation that "automatic distribution ceased after number whatever, lists received thereafter," but at the same time it informs the user that the library receives something from the institution in question.

Shelf Savings

The shelf savings resulting from this activity to date have been in the neighborhood of 15 to 20% for both libraries involved, but beyond that, the simplification of the collection maintenance has been a most useful by-product. Scanning a list for a particular paper is much more satisfactory than shuffling through several hundred reprints; the knowledge that all the limited space is being used efficiently is gratifying.

Literature Cited

1. For purposes of this discussion, "reprint" is used in the sense of a reproduction of an article originally published as part of a larger work, i. e., an offprint.
2. Kemp, D. Alasdair / *Astronomy and Astrophysics; a Bibliographical Guide.* London, Macdonald Technical & Scientific, 1970. 584p.
3. Coblans, Herbert, ed. / *Use of Physics Literature.* London, Butterworths, 1975. 290p.

Received for review Feb 17, 1978. Manuscript accepted for publication Jun 4, 1979.

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Assistance Offered

A fund for Research Grants-in-Aid was established by the SLA Board of Directors in June 1973, to support in whole or in part small research projects in special librarianship and related fields. The intention is to provide modest support for as many worthwhile projects as possible.

In spite of various attempts to publicize these grants, e.g., announcing them at each of the Research Committee's program meetings at the Annual Conference, occasional reminder letters to Chapter and Division Chairmen, and statements in *Special Libraries*, the response has been negligible. Only twelve applications have been received since the inception of the program. Of these, one was withdrawn before it was acted on; seven were rejected; and four were funded. While the percentage of rejections may seem high, the reasons were usually related to the fact that the projects did not seem appropriate for the Research Committee. In such cases the Committee frequently recommended Divisions, Chapters, or other Committees to which applicants could submit their proposals.

One might raise a question as to why an association such as SLA, whose members for many years bemoaned the lack of money for research, has so few applicants for Grants-in-Aid. One answer that has been suggested is the size of the grant.

The funding for the grants is necessarily limited; no more than 50% of the fund balance may be granted in any fiscal year. The prospect of being able to work at one's own pace and not be harried by the bureaucratic regulations of grants, however, should be appealing to any number of those concerned with the issues facing special libraries.

Selection/Publication

The SLA Grants-in-Aid Program is open to members and nonmembers. It is administered jointly by the Research Committee and the Association Office. The procedure for applying for a grant is relatively simple. Applications are sent to the Association Office where copies are made and forwarded to members of the Research Committee. Based on a majority vote, the Committee decides whether to select, modify, or reject the proposal. The Chairman of the Committee informs the applicant of the decision. Selection of a proposal is based on the nature of the research project and its potential for contributing to the objectives of SLA, the quality of the research design, and the capability of the applicant to complete the work described in the proposal.

Grant funds must be expended only in direct support of the proposed investigation and in the manner stated in the grant letter. Funds may not be used for normal living expenses, institutional overhead, salary, or tuition support. Grantees are expected to submit two copies of the final report of their research to the Committee with the understanding that SLA has the "first right of review" for publication. If the report is not accepted for publication by SLA and is subsequently published by another publisher, recognition of support from the Association must be given.

How to Apply

Those interested in submitting a proposal are urged to apply. Proposals should include the purpose of the proposed research, a background statement, the research methodology to be used, and a detailed budget. In addition, an abstract of 300 words and a vita must be included. Although it is not necessary to follow a specific form, one can obtain a suggested proposal outline from

Dr. Lucille Whalen, Chairman
SLA Research Committee
School of Library and Information Science
State University of New York
Albany, New York 12222

The *Grants-in-Aid Program* can be a valuable means of undertaking small projects or completing large ones, especially at a time when funds are so limited. It is hoped that many worthwhile applications will be received during the coming year. Questions regarding the program can be sent at any time to the members of the Committee: Noël Balke, Neal Kaske, Emily Mobley, Perry Morrison, or Lucille Whalen.

Lucille Whalen
Chairman
SLA Research Committee

Nominations for 1980 SLA Awards

Nominations for 1980 SLA awards are due by Jan 2, 1980. Individuals, as well as Chapters and Divisions, may submit nominations. All nominations must be completely documented within the definitions of the purposes of the three awards. Forms and instructions for nominations have been distributed to all Chapters and Divisions. Additional forms are available from the Association's New York Office.

The SLA Professional Award. This award is given after consideration of all significant contributions made to librarianship and information science. The definition of the SLA Professional Award is:

The SLA Professional Award is given to an individual or group, who may or may not hold membership in the Association, in recognition of a specific major achievement in, or a specific contribution to, the field of librarianship or information science, which advances the stated objectives of the Special Libraries Association. The timing of the Award shall follow as soon as practicable the recognized fruition of the contribution.

The SLA Hall of Fame. In documenting nominations, the following criteria for eligibility to the SLA Hall of Fame should be remembered:

SLA Hall of Fame election is granted to a member or a former member of the Association following the close of an active professional career for an extended and sustained period of **distinguished service to the Association in all spheres of its activities (Chapter, Division, and Association levels).** However, prolonged distinguished service within a Chapter or Division, which has contributed to the Association as a whole, may receive special consideration.

The basic purpose of the SLA Hall of Fame is to recognize those individuals who have made outstanding contributions to the growth and development of Special Libraries Association—as a whole—over a period of years.

The SLA John Cotton Dana Award. This award was established in June 1978 and is defined as follows:

The SLA John Cotton Dana Award recognizes exceptional services by members of Special Libraries Association to special librarianship. It may be given to an individual or a group of individuals.

Mail completed forms to:
Miriam Tees, Chairman
SLA Awards Committee
McGill University
Graduate School of Library Science
3459 McTavish Street
Montreal, P.Q., Canada H3A 1Y1

MEMBERS IN THE NEWS

Russell E. Bidlack, dean, University of Michigan School of Library Science ... awarded the 1979 ALA Melvil Dewey Medal.

Connie Bolden, law librarian, Washington State Law Library, Olympia ... elected president, American Association of Law Libraries.

Jack E. Brown, associate professor, McGill University, Montreal ... awarded the first Canadian Library Association Outstanding Service to Librarianship Award.

M. Rita Costello, Secane, Pa. ... appointed general reference librarian, Drexel University, Philadelphia, Pa.

Joseph M. Dagnese, SLA President and Director of Libraries and Audio-Visual Center, Purdue University, Ind. ... discussed the National Periodicals Center plan during a conference at University of Missouri, Kansas City.

Deborah Ellis Dennis, formerly research assistant and librarian, Social Research Group, George Washington University ... now administrative staff librarian, University of Maryland College Park Libraries.

James B. Dodd, SLA President-Elect, formerly coordinator of Service to Business & Industry, Price Gilbert Memorial Library, Georgia Institute of Technology, Atlanta, Ga. ... now head, Users Services Division, Gilbert Memorial Library.

Shirley Echelman, executive director, Medical Libraries Assocation ... appointed member, Advisory Committee to the White House Conference on Library and Information Services.

Shannon Lewis Faircloth, formerly law librarian, Meyers, Miller and Middleton, Dallas, Tex. . . . now sales representative, Acme Visible Records, Dallas.

Emil F. Frey, director, University of Texas Medical Branch Moody Medical Library, Galveston . . . recipient of the 1979 Nicholas and Katherine Leone Award for Administrative Excellence.

Roberta J. Gardner, manager, library services, Dun & Bradstreet, Inc., New York City . . . promoted to manager, information services.

Francis Gates, law librarian and professor, Columbia University, New York City . . . elected vice-president/president-elect, American Association of Law Libraries.

Charles J. Guenther, poet, translator, and former chief, Technical Library, U.S. Air Force Aeronautical Chart and Information Center, St. Louis, Mo. . . . awarded honorary Doctor of Humane Letters degree, Southern Illinois University, Edwardsville.

Vivian D. Hewitt, SLA Past-President and librarian, Carnegie Endowment for International Peace, New York City . . . elected director (1979/81), Council of National Library and Information Associations. Mrs. Hewitt was also awarded an honorary Doctor of Humane Letters, Geneva College, Beaver Falls, Pa.

Michael Homan, formerly with UCLA Biomedical Library, Los Angeles, Calif. . . . now head, Information Services, Corporate Technical Library, Upjohn Company, Kalamazoo, Mich.

Adele Hoskin, formerly librarian, Eli Lilly and Company Science Library . . . promoted to chief librarian.

Elisa Kadish . . . began work as law librarian, Smith, Currie, and Hancock, Atlanta, Ga.

Michael Koenig, formerly librarian, Institute for Scientific Information, Philadelphia . . . now vice-president of Operations, Swets North America, Berwyn, Pa.

Louise C. Lage, librarian, Eli Lilly & Co., Science Library, Indianapolis, Ind. . . . retired.

Chester M. Lewis, retired director of archives, *New York Times,* former SLA President, and member SLA Hall of Fame (1978) . . . named the first historian emeritus of the *Times.*

Irving Lieberman, professor, University of Washington School of Librarianship, Seattle . . . retired.

Mildred Love, professor, Division of Library and Information Science, St. John's University, Jamaica, N.Y. . . . appointed acting director of the division.

George Mandel, formerly assistant to division chief, Management Services Division, National Aeronautics and Space Administration Lewis Research Center, Cleveland, Ohio . . . promoted to chief of the division.

Ellis Mount, formerly senior lecturer, Columbia University School of Library Service, New York City . . . promoted to assistant professor.

Michael A. Osborne, formerly life sciences librarian, University of Utah, Salt Lake City . . . now project assistant of the History of Science Society's journal *Isis.*

Karen Patrias, formerly chief, Information Services, National Bureau of Standards Library, and administrative librarian, Naval Medical Research Institute, Bethesda, Md. . . . appointed chief, Reference and Bibliographic Services Section, National Institutes of Health, Bethesda, Md.

Joan Plessner . . . appointed publications and information librarian, New Mexico State Library, Sante Fe.

Richard D. Poisson, formerly associate librarian, Massachusetts Maritime Academy . . . now port director, United Seaman's Service, New York City.

Darl M. Rush, formerly head librarian and research editor, Donaldson Lufkin & Jenrette, New York City . . . promoted to vice-president, Administrative Division.

Peggy Sullivan, assistant commissioner for extension services, The Chicago Public Library . . . elected vice-president, president-elect, American Library Association.

Marian Veath, formerly librarian, Major Appliance Laboratory, General Electric Company, Louisville, Ky. . . . now librarian, Genealogical Library, Sons of the American Revolution, Louisville.

Elizabeth K. Tomlinson, formerly head, Chemistry and Microbiology, Library, University of Maryland, College Park . . . now Science librarian, Carleton and St. Olaf Colleges, Northfield, Minn.

Leslie Anne Wheaton, formerly reference librarian, and associate research editor, Donaldson, Lufkin & Jenrette, New York City . . . promoted to head librarian.

Helen Wilbur, assistant technical librarian, American Independent Oil Co., New York City . . . now librarian, Lead Industries Association & Zinc Institute, Inc., New York City.

HELP!

The SLA Library often receives requests from special librarians seeking information on library management and is trying to develop a collection of sample management documents to help answer these questions. Some materials have already been collected, but more are needed to make this collection a really useful resource.

Do you use any of the following kinds of documents in your library? Can you make them available to other special librarians? If you can, please send your contributions to:

Special Libraries Association
Marie Dooling, Librarian
235 Park Avenue South
New York, N.Y. 10003

We need:

- JOB DESCRIPTIONS
- CORPORATE ORGANIZATION CHARTS
- USER GUIDES & PROMOTIONAL LITERATURE
- STAFF MANUALS
- COLLECTION DEVELOPMENT POLICIES
- BUDGETS (IN PERCENTAGES)
- FLOOR PLANS
- USER-SURVEY QUESTIONNAIRES

CHAPTERS AND DIVISIONS

Boston The Chapter has recently released the eighth edition of *Special Libraries in Boston and Vicinity*. Listing 462 special libraries from the Boston area and neighboring states, the directory includes information such as addresses, telephone numbers, hours, listings of monographs, and in-house systems. The cost is $15 for SLA members, $25 for nonmembers (all orders prepaid); write Special Libraries Association/Boston Chapter, c/o Management Library, Arthur D. Little, 35 Acorn Park, Cambridge, Mass. 02140.

Central Pennsylvania Provisional Members of the new Chapter had an opportunity to meet members of the Central Pennsylvania Health Science Library Association during a jointly sponsored picnic on Jul 14 at the Kishacoguillas Park, Lewiston, Pa.

Oregon During the Chapter's Annual Business Meeting on May 12, members approved a motion to note the Chapter's regret that special libraries were omitted from the 1978 edition of *Directory and Statistics of Oregon Libraries*, which was published by the Oregon State Library. The motion also stated that the Chapter is willing to provide any necessary data to the State Library to facilitate publication of the special library listing in future directories. Two other groups, the Salem Area Special Librarians and the Portland Area Special Librarians, have offered SLA their cooperation in giving data for next year's directory.

Pacific Northwest The Chapter held its annual general meeting on May 12 at the Edgewater Inn, Seattle. Enid Slivka and Yvonne Abernathy, both of the Seattle Public Library, discussed the nature and development of libraries in the People's Republic of China.

Princeton-Trenton On Jul 20–21, the Chapter cosponsored a Conference on the Preservation of Library Material. Also participating were the Library Binding Institute and the Rutgers Graduate School of Library and Information Science. Twelve guest speakers discussed materials and methods of preservation, as well as the relationship between the binder and the librarian. Films and other audiovisual presentations were also shown.

Publishing The Division has compiled a second special issue of its *Bulletin*, focusing on "Profiles of Special Libraries." A similar issue containing profiles 1–17 was published in 1974; the second issue contains profiles 18–30. In addition to articles on publishing industry libraries, the new "Profiles" includes some libraries at related businesses such as the Minority Information Office. The fifty-page issue is $6, prepaid; contact Ron Coplen, Harcourt Brace Jovanovich, Inc., Library–4th floor, 757 Third Ave., New York, N.Y. 10017.

Rocky Mountain Several Chapter members have produced the fourth revised edition of *Specialized Library Resources in Colorado*, the Chapter directory project. The entries are listed alphabetically by name and also by location. In addition, a list of staff members is included. The directory is $5.50 from editor Barb MacDonald, 2500 Stuart St., Denver, Colo. 80212.

Southern California The Annual business meeting was held on Jun 3 at Marina del Ray. A brunch was offered and new officers were introduced.

A twenty-three member delegation from the Japan Special Libraries Association (Sentokyo) visited several libraries in Southern California after the SLA Annual Conference in Honolulu. On Jun 14, the visitors were honored with a barbecue sponsored by the Chapter and the Los Angeles Chapter of ASIS. On Jun 15, they visited Lockheed Corporation information centers in Burbank and Rye Canyon. In addition, they toured the Atlantic-Richfield Corporation library, Los Angeles, the California Instiute of Technology, Pasadena, and the Los Angeles *Times* library.

Texas "Management Concepts and Functions" was the title of a two-day workshop sponsored by the Chapter during its quarterly meeting Sep 14 and 15 in Houston. Sara M. Freedman and Dick Montanari, University of Houston, conducted the workshop.

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HAVE YOU HEARD?

Health Sciences Serials

The 1979/80 *Union List of Health Sciences Serials* of the USC Norris Medical Library and the Los Angeles County/USC Medical Center Libraries has recently become available for purchase. Over 4,000 current and ceased titles are covered for USC's schools of medicine and pharmacy; each entry lists title, beginning date of publication, location, holdings statement, notes, and cross references. Each copy is $8. Contact: Norris Medical Library, University of Southern California, 2025 Zonal Ave., Los Angeles, Calif. 90033. Attn: Linda J. Azuma, serials assistant (213/226-2231).

ERA Ratification

The American Library Association ERA Task Force is currently identifying librarians who have been or are now involved in campaigns to have the Equal Rights Amendment ratified in their states that have not yet ratified the Amendment. Any such librarians may send their names and a description of their efforts to Kay Cassell, cochairman, ERA Task Force, Bethelehem Public Library, 451 Delaware Ave., Delmar, N.Y. 12054.

New NMA Publications Price Policy

As a result of a decision of the National Micrographics Association (NMA) Board of Directors, a new pricing policy for NMA publications has been adopted as of Jul 1, 1979. NMA members now receive a 25% discount on any new NMA publications, except information packages, standards, and standard-related items, for the first sixty days after they are published. New members receive a 25% discount on all NMA publications, with the same exceptions, during the first sixty days of membership. Separate prices for members and nonmembers have been eliminated. On prepaid orders, both members and nonmembers may deduct 10% from the total purchase amount. For a publication brochure, contact: NMA Publications Sales, 8719 Colesville Rd., Silver Spring, Md. 20910 (301/587-8202).

Continuing Education Standards

The Board of Directors of the Continuing Library Education Network and Exchange (CLENE) has formed a panel to formulate criteria for quality continuing library education to use as a guide in evaluating continuing education programs. The panel will also develop assessment guidelines and investigate the feasibility of a national voluntary system for recognition of providers who meet the criteria for continuing education programs. The research is provided by a Title II-B Higher Education Act grant from the U.S. Office of Education, Office of Libraries and Learning Resources.

New Canadian Association Officers

The Canadian Library Association has elected Alan H. MacDonald, director of libraries, University of Calgary, Alberta, as its first vice-president (president-elect). MacDonald had been treasurer and is replaced by Francoise Hebert, director, National Library Services, Canadian National Institute for the Blind, Toronto. The Association, based in Ottawa, held its annual conference Jun 13–20 in that city; at that time all new officers assumed their duties.

Conservation Program at Columbia

The School of Library Science, Columbia University, New York City, has begun a planning study on the establishment of a training program for administrators and conservators of library and archival materials. Funded by a National Endowment for the Humanities grant, the programs would use both Columbia facilities and those at the Conservation Center, New York University. The planning study will develop a curricu-

lum and identify personnel and facilities needed beyond those available at Columbia and N.Y.U. The program is scheduled to begin admitting students in fall semester 1981.

British Scientific Research

Research in British Universities, Polytechnics and Colleges is being produced by the British Library. The annual publication will appear in three volumes, v. 1, Physical Sciences ($30); v. 2, Biological Sciences ($20); v. 3, Social Sciences ($20). Each volume includes information from 3,000 departments in British universities, polytechnics and colleges, as well as lists of research in progress, with names of investigators for each project or area. A name index and keyword index are also in each volume. Contact: RBUPC, British Library, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, England (0937 843434).

Rehabilitation Newsletter

The National Rehabilitation Information Center (NARIC) began publication of *The Pathfinder* during Summer 1979. Published six times a year, *The Pathfinder* will be used to share information on services, resources, and new technology related to rehabilitation information, according to Judith J. Senkevith, NARIC director. The yearly subscription is $30. It is available from NARIC, Eight and Varnum Sts., N.E., the Catholic University of America, Washington, D.C. 20064.

Pittsburgh Library Degree

The University of Pittsburgh School of Library and Information Science has been authorized to begin an undergraduate program in information science leading to the Bachelor of Science degree. This program parallels a successful program that the School of General Studies has offered to evening students for several years. Students will enter the program during their third college year. In addition, the school has dropped the graduate designation from its name.

Contract Awards Data Base

An on-line data base that covers federal contract awards has been produced by Documentation Associates, Los Angeles. The current information contains approximately 13,000 awards from fiscal year 1978. United States Contracts Awards (USCA) is produced in conjunction with hard-copy listings published by Washington Representative Services. The awards are classified as experimental, developmental, test and research, expert and consultant services, and training services. USCA is available for searching through SDC ORBIT at $85/hour connect time plus $.15/citation. Contact: Libby Williams, Documentation Associates, 11720 West Pico Blvd., Los Angeles, Calif. 90064 (213/477-5081).

1977 Economic Censuses

The Census Bureau is completing work on the 1977 Economic Censuses for publication early in 1980. Until then, the Bureau has made available a *Mini-Guide to the 1977 Economic Censuses*, which provides information about the economic census geography, the individual censuses, and other related data. A complimentary copy of the *Mini-Guide* is available from the Data Users Services Division, Bureau of the Census, Washington, D.C. 20233.

Canadian Subject Headings

The National Library of Canada has produced *Canadian Subject Headings*, designed to be compatible with the *Library of Congress Subject Headings*. The Canadian list includes headings for topics such as Canadian history and literature as well as for various fields that have a considerable body of Canadian material. Where necessary, holdings in the Canadian work are coded to indicate their relation to a corresponding heading on the LC list. This list incorporates the 1968 List of *Canadian Subject Headings* which was published by the Canadian Library Association. $9.95 in Canada; $11.95 elsewhere. Write: Publishing Centre, Printing and Publishing, Supply and Services Canada, Hull, P.Q. K1A 0S9.

Scientific Source Preservation

The American Federation of Information Processing Societies, Inc. (AFIPS) has published an introductory brochure, *Preserving Computer-Related Source Materials*, which briefly explains the need and methods of preserving materials dealing with the history and development of computers and computing equipment. The brochure is meant to aid computer scientists, engineers, programmers, and similar professionals, as well as their friends and colleagues, in assessing the papers and artifacts in their possession. It also directs these people to the appropriate institutions that can preserve the materials. Copies are available from Jane Smith, AFIPS, 1815 North Lynn St., Arlington, Va. 22209.

CNLIA Solicits Financial Support for ANSC Z39

In the United States, the principal responsibility for developing and promoting standards for library science, e.g., information systems, products, and services, rests with the American National Standards Committee Z39: Library and Information Sciences, and Related Publishing Practices.

The Council of National Library and Information Association (CNLIA) is the ANSC Z39 Secretariat and is responsible for securing financial support for Z39. Throughout its history, acquiring adequate financial support has limited the activities of Z39. Revenues derived from the sale of standards are retained by ANSI and do not contribute to the support of Z39. Thus the Committee must seek outside contributions to support its activities.

In 1961, Z39 obtained grants from the Council on Library Resources (CLR) and the National Science Foundation (NSF). These grants plus subsequent financial support from CLR and NSF have lead to the Z39 standards that have been developed and are now being used by libraries, information services, and publishers. During 1977 and 1978, a task force appointed by the National Commission on Libraries and Information Science (NCLIS) reviewed the activities of Z39 and recommended that Z39 step up its level of activity and that the committee also seek a broader funding base to support its standards development program. Since July 1978, the National Bureau of Standards has contributed office space, furnishings, telephone, printing, and mailing services to Z39. Interim financial support has continued to be received from CLR and NSF as well as from NCLIS and OCLC, Inc.

For Z39 to remain a responsive and effective standards mechanism and to continue to build a program which is responsive to community needs, it must have adequate funding. Libraries, information services, publishers, and other organizations that benefit from the activities of Z39 are being asked to contribute funds to support Z39. For the period Oct 1, 1979–Sep 30, 1980, Z39 requires $103,300 exclusive of the contribution in kind of the National Bureau of Standards.

Erratum

The "Have You Heard?" item concerning the Southeastern Regional Medical Library Program (Aug *SL*, p. 351) should state that the Medical Library Association has established an Ad Hoc Committee to Develop Criteria for Hospital Library Consultants.

STAFF DEVELOPMENT

Benford, Robert J., et al. / Training for Results. *Personnel* 56(no.3):17–24 (May–Jun 1979).

The training director has responsibility to ensure future productivity and organizational effectiveness. The authors analyze factors which diminish the effectiveness of training programs, e.g., inadequate front-end diagnosis and overreliance on training as the only strategy for change, and show how a training program based on three major components—situational analysis, design of a training system, and post-training follow-up—can bring about measurable on-the-job performance improvements and contribute to corporate earnings.

Brown, David S. / The Myth of Reorganizing. *Journal of Systems Management* 30(no.6):6–10 (Jun 1979).

While recognizing that reorganization sometimes has merit, the author points out that in itself, it will not produce real or lasting change and that to equate it with reform is a myth. There is no evidence to show that reorganization actually achieves its goals. Some of the disadvantages of reorganizing include the disruption of on-going operations, lower morale, departure of key personnel, and a general reduction in both efficiency and effectiveness. Some alternatives to reorganizing are presented and discussed; among them are the incremental

approach, understanding and addressing the system, and training and re-training.

Clinard, Helen / Interpersonal Communication Skills Training. *Training and Development Journal* 33(no. 8):34–38 (Aug 1979).

Presents a method of training in interpersonal communications skills. Rather than teaching skills for specific situations, the author teaches generalized communication-skill formulas which can be used not only in the business world but in social and home situations also. Describes the three factors necessary for skills development: 1) a cognitive understanding of the skill, what it is, how and when to use it; 2) practice in the use of the skill, e.g., in role-playing; and 3) an appreciation of the skill—an awareness of the need for it and the potential benefits derived from its use.

Davis, Tim R. and Fred Luthans / Leadership Reexamined: A Behavioral Approach. *Academy of Management Review* 4(no. 2):237–248 (1979).

Although leadership continues to be extensively researched, no consistent, direct correlation has been demonstrated between it and improved organizational effectiveness. Leadership from a behavioral perspective is examined. The approach is based on tested principles of operant research and focuses on observable behavioral events using an operationally defined set of concepts. It stresses the vital role played by the subordinate in the selection, design, and implementation of behavioral change programs.

Farnsworth, Terry / How to Develop Yourself. *Management Today.* pp. 51, 54, 56 (May 1979).

Managers are all too often so involved in the development of their subordinates that they fail to take responsibility for their own self-development. Starting with the necessity of clear objectives, the author outlines steps that can be taken, many within the daily routine of the job, to become better managers and prepare for promotion. Among these are encouraging the boss to delegate challenging assignments, learning to question senior managers about their problems, offering to teach or lead discussions, and building up a personal network of business contacts. A self-development checklist is included.

Flynn, W. Randolph and William Stratton / Changing an Ineffective Boss into a Model Manager. *Supervisory Management* 24(no.7): 14–21 (Jul 1979).

In spite of formal training and considerable experience, some managers are not successful. In the case of the ineffective manager, the apprentice must sometimes educate the master. Suggesting to one's boss that he or she needs improvement in management skills, however, is likely to be threatening and will probably result in some defense mechanism, such as agression, withdrawal, rationalization or projection. Authors describe other methods that can be used: behavior modification, modelling, gaining the support of others, and, as a last resort, appealing to higher authority. The careful use of communication skills combined with a positive, objective approach will help to ensure that change efforts meet with success.

Martin, Anthony W. and Dennis A. Hawver / Behavior Analysis: A Productive Approach to Management Skill Development. *Management Review* 68(no.8):22–25 (Aug 1979).

While management theorists provide information on what managers are supposed to be doing, studies show wide differences in the theory and what managers actually do. Most research studies do not, however, provide any measurement of the behavioral differences between the more skilled and the less skilled manager. In behavior analysis, trained observers unobtrusively record managerial interactions in particular settings, such as committee meetings and employment interviews, and by means of a checklist of specific behaviors, are able to give almost immediate feedback to the managers. Correlation of observed behaviors with results of the behavior makes it possible to identify certain behavior patterns that lead to success and can then serve as models for skills development.

Merrell, V. Dallas / Huddling to Get Results. *Supervisory Management* 24(no.7):2–8 (Jul 1979).

In spite of the difficulties faced by organizations in achieving their goals, there are people in organizations, whom the author calls "huddlers," who accomplish significant results. A huddle is a temporary, intimate, work-oriented encounter between two or more people. It is the source of considerable information, the locus of significant decisions, the setting of power transactions, the place where many respon-

sibilities get defined, and the impetus for motivating people to get things done. The scope and depth of participation in huddles and the various roles played by huddlers, e.g., idea person, evaluator, tension reliever, are described.

Moore, Lynda L. / From Manpower Planning to Human Resources Planning Through Career Development. *Personnel* 56(no.3):9-16 (May-Jun 1979).

Organizations have usually had one of two types of career planning: developing individuals but ignoring the total organizational human resources supply and demand or developing corporate human resources without adequately identifying, developing, and training certain employees for specific career tracts. More recently, organizations are using a two-fold approach based on both of these types as a means of increasing productivity, improving employee attitudes toward work, and developing greater work satisfaction. Four basic techniques of career planning—workshops, one-on-one counseling, self-assessment and planning workbooks, and communication of job opportunities—and elements of a good career planning program are discussed.

Pack, Raymond J. and William M. Vicars / MBO—Today and Tomorrow. *Personnel* 56(no.3):68-77 (May-Jun 1979).

An overall view of management by objectives (MBO) since its popularization in the 1950s. Research studies show that MBO is used successfully for varying purposes and with different management styles and that one of its most important advantages is the overall effect of setting goals. Several key questions are posed for those initiating an MBO program or for evaluating an on-going program. The authors acknowledge the success of many MBO programs but point out some of the problems encountered in using them. Several trends, such as combining MBO with transactional analysis (TA) and zero-based budgeting (ZBB), indicate a continued use of MBO and the necessity for more and better training in applied behavioral science.

Thackray, John / The Feminist Manager. *Management Today* pp. 90-92 (Apr 1979).

While American women have made some progress in the executive suite, it has been slow and unspectacular. Fewer than 2% hold directorships of top corporations; fewer than 1%, top management posts; and only 5-6% hold middle management positions. The increasing number of women who are graduating from prestigous business schools today and are being eagerly sought by business is an indication that women are moving through the pipeline, but, according to this British author, the culture of the pipeline at the intake is not the same as at the middle and higher management zone. As women get closer to the top, the resistance hardens, and they frequently are eased out of the mainstream of power to become experts or technicians.

Lucille Whalen

REVIEWS

Electronic Delivery of Documents and Graphics, by Daniel M. Costigan. Van Nostrand Reinhold Co., New York, 1978. 344p. $21.95. ISBN 0-442-80036-3.

The management of information resources requires an up-to-date understanding and knowledge of advancing technologies used for announcing, processing, and distributing data and information. One of these electronic tools is facsimile transmission, generally referred to as "fax." It permits sending written, typed, printed, drawn, and photographed information from one location to another by means of telephone lines.

This excellent work is the author's second book on the subject. Costigan, a systems analyst and communications engineer at Bell Telephone Laboratories, New Jersey, is a well-informed author. He is a member of a number of technical societies including the National Micrographics Association's Facsimile Standards Committee, whose standards are approved by the American National Standards Institute. The book is up-to-date on the subject; although the technology is advancing at an increased rate, this work will not be outdated as quickly as a work on computers.

The author introduces the reader to the operation, economics, and standards of fax, as well as other document and graphic communications systems. The last chapter discusses possible future developments in the field. Nine chapters are supplemented by an appendix with descriptions of commercial systems, a selection guide, and a comprehensive list of suppliers. It is useful to anyone planning an information system, expanding an existing one, serving on a networking committee, concerned with regional libraries, or just keeping up with the times. The text is well written and understandable. This is a text that should be part of library school collections.

Electronic delivery already may be available to many special librarians because it is in use in their organizations. At Airco, librarians use it to transmit references, abstracts, translations, documents, and business and technical correspondence to company locations both in the United States and abroad. The author discusses the place of fax in libraries and notes an early application to interlibrary loans by two large university systems.

Some of the advantages of fax transmission for high-priority information noted by the author include speed, same-day delivery, and the usual low cost when compared with express mail or messenger service. In addition, data can be sent anytime if the machine is set for automatic. Innovation for improved service within an information center often can be realized by applications that make use of electronic technologies such as fax.

Loretta J. Kiersky
Airco Information Center
Murray Hill, New Jersey

Private Law Library: 1980's and Beyond, by Richard Sloane and Marie Wallace. New York, Practising Law Institute, 1979. 320p.

This course handbook is a collection of some sixteen articles that formed the basis for the Practicing Law Institute seminar on private law library problems of the 1980s which was held in Los Angeles in April and in New York in May 1979. Its chief virtue is that the people who wrote the articles are actively engaged each day as librarians, practitioners, or consultants in the very work that they write about.

The articles fall chiefly into four major groups: 1) Use of Space; 2) The New Library Machines; 3) Information Management; and 4) Coordination of Lawyer Work Products. In addition, there are separate chapters on branch libraries by Harold L. Rock, a senior partner in a large Omaha firm that has branches in Denver, Atlanta, Minneapolis, and Washington, D.C.; cost control by Laura M. Strain, a law firm librarian in Los Angeles; cooperative or common libraries by Diane W. Huigen, a San Francisco law firm librarian who manages a successful "library cooperative"; business library services by the co-editor, Richard Sloane; corporate law department libraries by Geral-

dine M. Brown, librarian in a prominent Rochester, N.Y., company; and middle management by Mary Ann Roman, Indianapolis.

The authors of each of the three articles on library space matters have had recent experience in campaigning for adequate facilities for books, readers, equipment, and staff. They are Marie Wallace, the co-editor (Los Angeles); Blanche J. Guzzetta (New York) and Terence R. Pragnell (Los Angeles).

Those discussing the new machines are Francis H. Musselman and David G. Badertscher (both of New York) and Mary K. Salovaara (Chicago). Stanley K. Pearce and Jaine Urban (Los Angeles) deal with information management. Finally, the coordination of law work products is covered by Richard Sloane, the co-editor (Philadelphia).

Several of the chapters are accompanied by up-to-date bibliographies that were prepared for this handbook and were not dredged out of someone's satchel or storeroom. All in all, it is a fact-packed compendium for librarians and practitioners.

Julius J. Marke
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New York, N.Y.

PUBS

(79-068) **On-Line Start-Up Package.** New England On-Line Users Group. Chestnut Hill, Mass., NENON, 1979. 156. $3.00.

Short introduction to the problems of starting on-line searching services. Includes a bibliography. Available from: NENON, c/o Marilyn Grant, Boston College Science Library, Devlin Hall, Chestnut Hill, Mass. 02167. Checks payable to New England On-Line Users Group.

(79-069) **Use of Library Materials: The University of Pittsburgh Study.** Kent, Allen, and others. New York, Marcel Dekker, 1979. 272p. $25.00. LC 79-11513; ISBN 0-8247-6807-8.

Purpose of the study was "to develop measures for determining the extent to which library materials (books/monographs and journals) are used, and the full cost of such use" (Chapter 1). The book documents how book and journal use was measured and how costs and benefits of use were determined; discusses the possibility of cost reduction through resource sharing.

(79-070) **Biomedical Subject Headings: A Reconciliation of National Library of Medicine (MeSH) and Library of Congress Subject Headings.** 2d ed. Muench, Eugene V. Hamden, Conn., Shoe String Press, 1979. 774p. $52.50. LC 78-27206; ISBN 0-208-01747-X.

Main section of the book is the MeSH listing with LC equivalents; other sections show MeSH-LC subheadings equivalents and LC -to-MeSH equivalents for LC terms which do not fall into the alphabetical sequence in the main section.

(79-071) **Where's that Rule? A Cross-Index of the Two Editions of the Anglo-American Cataloging Rules.** Halger, Ronald. Ottawa, Canadian Library Assn., 1979 (Distributed in the United States by American Library Assn.). 127p. $5.00. ISBN 0-88802-123-2.

A key to the new AACR 2 cataloging rules, for catalogers used to AACR 1. Each AACR 1 rule is matched with the corresponding AACR 2 rule, and vice versa. Includes commentaries on changes in the rules.

(79-072) **AACR 2: An Introduction.** Hunter, Eric. Hamden, Conn., Linnet, 1979. 148p. $12.50. LC 78-23933; ISBN 0-208-01684-8.

A programmed text, designed to teach the underlying principles of AACR 2, but not to give a detailed knowledge of the rules themselves.

(79-073) **Handbooks and Tables in Science and Technology.** Powell, Russell H., ed. Phoenix, Oryx Press, 1979. 184p. $22.50. LC 78-31168; ISBN 0-912700-27-0.

Bibliography of over 2,000 handbooks and tables. Listed alphabetically by title, with separate sections for medical handbooks and National Bureau of Standards publications. Subject and author/editor indexes.

(79-074) **How to Find Chemical Information: A Guide for Practicing Chemists, Teachers, and Students.** Maizell, Robert E. New York, Wiley-Interscience, 1979. 261p. $17.95. LC 78-23222; ISBN 0-471-56531-8.

Topics covered include: current awareness programs; locating books, articles, and documents; Chemical Abstracts and other services; computer-based retrieval systems; reviews and other reference books; locating patent, safety, and physical property data; and chemical marketing and business information.

(79-075) **Survey of Vendors of Automated Circulation Systems—Systems Interface.** Washington, D.C., Metropolitan Washington Library Council, 1979. 25p. $3.00 to nonmembers.

Report on vendors' interest in and commitment to developing interfaces between their systems. Available from: Metropolitan Washington Library Council, Suite 201, 1225 Connecticut Ave, NW, Washington, D.C. 20036. Report No. 79-102.

(79-076) **Library Computer Equipment Review.** v. 1 (no. 1) (Jan-Jun 1979). Semi-annual. $85.00-$150.00/year, depending on type of organization and size of book and periodical budget. ISSN 0191-1295.

Each issue is devoted to a central theme (v. 1, no. 1 is about teleprinters). A tutorial article introduces the reader to the equipment group in general; product reviews describe in detail specific makes and models. Published by Microform Review, Inc., 520 Riverside Ave., P.O. Box 405 Saugatuck Station, Westport, Conn. 06880.

(79-077) **Business and Government News.** v. 1 (no. 1) (Jan 1979). Monthly. $500/year for monthly issues only; $600/year for monthly issues with cumulation; $400 for cumulation only. ISSN 0707-1949.

Index and abstracts of business and government-related articles in 14 Canadian newspapers (Financial Post, Financial Times, and 12 dailies). About 3,000 articles per month are covered. Available from: Infomart, One Yonge St., Suite 1506, Toronto, Ontario M5E 1E5.

(79-078) **An Index to Standard Interest Profiles in Science and Technology 1979.** Bonham, Miriam, ed. Bloomington, Ind., Indiana U. Chemical Information Center, 1979. Unpaged. $10.00. ISSN 0192-4753.

Listing, alphabetical by keyword of standard interest profiles, of current awareness publications. Each entry includes producer, frequency, price, source of citations, and type of information provided. Available from: Chemical Information Center, Dept. of Chemistry, Indiana University, Bloomington, Ind. 47405.

(79-079) **Personnel in Libraries.** LJ Special Report No. 10. New York, Library Journal, R. R. Bowker, 1979. 63p. $5.00, $3.95 prepaid. ISBN 0-8352-1192-4; ISSN 0362-448X.

A miscellany of essays covering such topics as professional growth, performance and reward, the role of professional associations, and sex discrimination; with a bibliography on personnel management.

(79-080) **International Relations Dictionary.** Washington, D.C., Department of State Library, 1978. 48p. $2.30. GPO Stock No. 044-001-01715-6.

List of acronyms, words, and phrases in current foreign-affairs usage. Each definition is accompanied by bibliographic citations giving sources for the definition.

(79-081) **From Press to People: Collecting and Using U.S. Government Publications.** Nakata, Yuri. Chicago, American Library Assn., 1979. 212p. $15.00. LC 78-26306; ISBN 0-8389-0264-2.

An introduction to government documents: acquisition and collection organization, use of government documents as reference sources. A chapter on government technical reports, data bases, and information services is included.

(79-082) **Performance Appraisal.** SPEC Kit 53. Washington, D.C., Systems and Procedures Exchange Center, Association of Research Libraries, 1979. 116p. $7.50 to ARL members and SPEC Subscribers, $15.00 to all others.

"Six documents on performance appraisal forms, policies, and procedures; four documents on evaluation of supervisors; two documents on training supervisors in performance appraisal methodology; and one document on planning a performance appraisal system" (from the SPEC flyer). Available from: SPEC, Office of Management Studies, 1527 New Hampshire Ave., NW, Washington, D.C. 20036.

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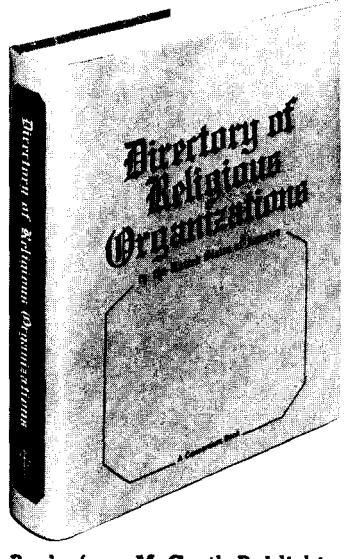

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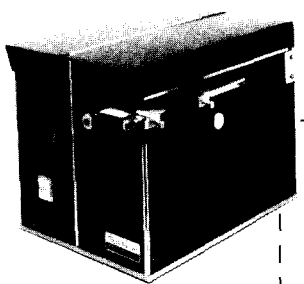

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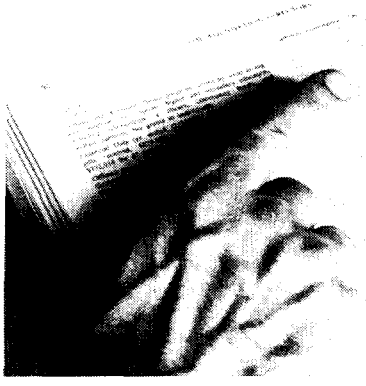

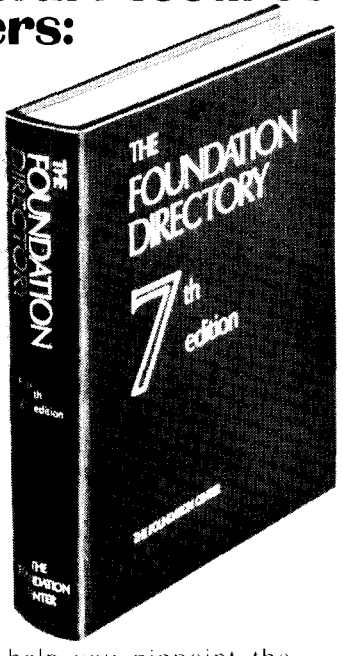

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